call when done.

Access DB# 89087

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Pamela Wingood Examiner #: 73103 Date: 3.14.03
Art Unit: 3736 Phone Number 305 2676 Serial Number: 09/644,676
Mail Box and Bldg/Room Location: CP2 9E14 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): Xiaohong Peng

Earliest Priority Filing Date: 8/25/99 (?)

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

reagent for ovulation/menstruation/period detection device

Claims 1, 7, 12 are similar.

Reagent is described by characteristics in these claims.

Check characteristics & also specifically named ~~reagents~~ chemicals for use as reagent ~~in~~ for ovul./etc. detection device.

****

STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher: Julie Walker	NA Sequence (#)		STN	✓
Searcher Phone #: 305-8587	AA Sequence (#)		Dialog	✓
Searcher Location: CP2-2008	Structure (#)		Questel/Orbit	
Date Searcher Picked Up: 3/14/03	Bibliographic	✓	Dr.Link	
Date Completed: 3/17/03	Litigation		Lexis/Nexis	
Searcher Prep & Review Time: ~~100~~ 96m	Fulltext	✓	Sequence Systems	
Clerical Prep Time:	Patent Family		WWW/Internet	✓
Online Time: ~~50m~~ 54m	Other		Other (specify)	

PTO-1590 (8-01)

3.10

600/551

Search using: O FAST ◉ Google O Inktomi O Teoma

ovulation "Hydrogen peroxide" color SEARCH Homepage | Advanced Search

CUSTOM WEB FILTERS HotBot Skins | Prefer

Language: **English** -- Date: **Before August 1999** -- Block Offensive Content: **Never** [Edit this Searc

WEB RESULTS by Google (Showing Results 1 - 10 of 15)

1. Progesterone ELISA Test Kit
... are used to confirm whether **ovulation** has occurred ... with the peroxidase to produce **color** (blue) in ... 3' 5 5'-tetramethylbenzidine (TMB) and **hydrogen peroxide** in a ...
http://www.atlaslink-inc.com/elisa/progesterone.doc - 0 B

2. Detection of Bromodeoxyuridine in Paraffin- embedded Tissue ...
... hydrochloride (DAB) and 0.02% **hydrogen peroxide** in TBS ... the cell nuclei stain a uniform blue with hematoxylin ... growth and atresia following **ovulation** in pigs ...
http://www.roche-applied-science.com/biochemica/no1_98/p17.pdf - 0 B

3. Effects of food deprivation . . .
... of reproduction including puberty, **ovulation**, reproductive behavior ... in the presence of **hydrog peroxide** (0.05%) and ... RECEPTORS 7 For digital (**color**) version in ...
http://www-unix.oit.umass.edu/~blaustei/YD_PRIRX.PDF - 0 B

4. Material Safety Data Sheet Dictionary
... Appearance includes the **color**, size, and consistency of a ... a structural derivative of **hydrogen peroxide** where one or ... **Ovulation** - The process in which an ovum is ...
http://www.umt.edu/research/files/environ/appendic.htm - 59 KB

5. Regulation of Cyclooxygenase Gene Expression in Rat Endometrial ...
... the cells were incubated in 0.1% **hydrogen peroxide** in PBS ... the cells was detected as a red **c** after incubation ... primarily due to a defect in **ovulation** and the ...
http://publish.uwo.ca/~kennedyt/t109.pdf - 0 B

6. untitled
... data for determining the time of **ovulation** in an ... Method and apparatus for multi-**color** laser e ... 423/700 5215735 Co-production of **hydrogen peroxide** and a ...
http://ftp.std.com/obi/Patents/Titles/930601 - 101 KB

7. INDEX OF DIETARY SUPPLEMENTS
... An experiment with **hydrogen peroxide**-induced cytotoxicity and ... bees and gives her incredibl stamina, **ovulation** ability and ... but may range in **color** from black to ...
http://vitamindigest.bestnutrition.com/dietary-supplements.htm - 81 KB

8. untitled
... catalse: enzyme that breaks down **hydrogen peroxide**. ... produced by the epidermis that gives **color**. ... **ovulation**: in human females, the monthly release of an ...
http://www.geocities.com/SunsetStrip/Palladium/9613/lifesci.htm - 61 KB

9. Herb Information From A Contributor's Files
... First wash out the ears with warmed **Hydrogen Peroxide**, I use a ... 30 seconds she sat up and t **color** returned to ... usually 1/4 to 1/2 tsp starting after **ovulation**. ...
http://www.gentlebirth.org/archives/herbsvol.html - 101 KB

10. untitled
... ble so that changes in the **color** of the ... 1. Medications such as, salt, **hydrogen peroxide** (3%) ... the later stages of menopause when **ovulation** has nearly ...
http://www.icomm.ca/survival/medic90.don/30-medic.htm - 101 KB

« **Previous** | **Next** »

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Set     Items   Description
S1       4875   OVULAT? OR LUTEINIZ? OR LUTEINIS?
S2      31871   HYDROGEN()PEROXIDE OR H2O2
S3     274554   COLOR? OR COLOUR?
S4     244602   BENZIDINE OR TETRAMETHYLBENZIDINE OR DIAMINOBENZIDINE OR S-
             ALT? ? OR 3()AMINO()9()ETHYLCARBAZOLE OR 4()METHOXY(2W)NAPHTH-
             OL OR O()(TOLIDINE OR DIANISIDINE OR METHOXYPHENOL OR PHENYLE-
             NEDIAMINE) OR 5()AMINOSALICYLIC OR PYROGALLOL
S5        392   S1 AND S2 AND (S3 OR S4)
S6        125   S5 AND IC=(A61B OR G01N)
S7       9966   S2(S)(S3 OR S4)
S8         68   S7 AND S1 AND IC=(A61B OR G01N)
S9         68   IDPAT (sorted in duplicate/non-duplicate order)
S10        65   IDPAT (primary/non-duplicate records only)
? show files
File 348:EUROPEAN PATENTS 1978-2003/Mar W02
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030306,UT=20030227
         (c) 2003 WIPO/Univentio
```

Biblio NPL

8/5/7 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

05335228 EMBASE No: 1993103313
Semiquantitative assay of human chorionic gonadotropin by a simple and fast immunofiltration technique
Rapak A.; Szewczuk A.
European Journal of Clinical Chemistry and Clinical Biochemistry (EUR. J. CLIN. CHEM. CLIN. BIOCHEM.) (Germany) 1993, 31/3 (153-157)
CODEN: EJCBE ISSN: 0939-4974

An immnunofiltration technique for the semiquantitative assay of human chorionic gonadotropin (hCG) was applied in two versions, using different antibodies. One anti-betahCG subunit was immobilized on a glass microfibre disc in the form of six radially located bars, and the dry disc was placed on a water-absorbing material in a plastic device. A second antibody labelled with horse radish peroxidase conjugate was used in solution. For the **colour** reaction a solution with **tetramethylbenzidine** and **hydrogen peroxide** was used. The number of blue bars appearing on the test disc depended on concentration range of human chorionic gonadotropin. The technique with the monoclonal antibodies, anti-betahCG and anti-alphahCG-horse radish peroxidase conjugate, was specific for intact human chorionic gonadotropin, while the technique with the rabbit antibodies, raised against synthetic fragment 122-145-betahCG and betahCG-horse radish peroxidase, was useful for both intact human chorionic gonadotropin and its beta-chain. Cross reactions with human lutropin and thyrotropin were negligible. Haemoglobin, urea and various tested drugs did not affect the assay. In the assay of human chorionic gonadotropin in the urine of pregnant women and in sera of patients with trophoblastic diseases, the results from the immunofiltration technique were in accordance with data obtained by classical ELISA and by two commercial kits.

8/5/9 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04383808 JICST ACCESSION NUMBER: 99A0930603 FILE SEGMENT: JICST-E
Ovulation **and Trace Elements.**
SASAKI JUNZO (1); KIMURA TOJI (1); KOGAMI TAKASHI (1); MIKI YUKARI (1); NOMURA TAKAKO (1); SHINOHARA ATSUKO (2); CHIBA MOMOKO (2)
Biomed Res Trace Elem, 1999, VOL.10,NO.1, PAGE.25-31, FIG.2, TBL.3, REF.18
JOURNAL NUMBER: L1046AAS ISSN NO: 0916-717X
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
ABSTRACT: The expression of Mn-SOD mRNA during PMSG/hCG-induced **ovulation** and the estrous cycle in rat female reproductive organs was investigated by in situ hybridization. Before **ovulation** occurred, expression was observed in the theca interna cells. Just after **ovulation** had occurred, expression became marked in granulosa cells exhibiting **luteinization** , and later expression was localized in the corpora lutea. Expression of Mn-SOD mRNA was not induced in granulosa cells of unovulated follicles. Various elements in the ovary during PMSG/hCG- **ovulation** were analyzed by atomic absorption spectrometry, **colorimetry** or microwave-induced plasma mass-spetrometry(MIP-MS). The treatment with PMSG increased the ovary weight from 0.0098g to 0.0149g,

and further treatment with hCG increased it to 0.0202g. Five elements were found to be present in large amounts in the following order; K>P>Na>Mg>Ca. The weight-s of these elements increased with increase in the ovary weight. Marked increases in weight of Mn, Cu, Zn, Rb, Fe and Se were also observed. Laloraya and colleagues have suggested that LH-induced SOD might generate **hydrogen peroxide** , so enhancing the peroxidase-ascorbate system responsible for the production of progesterone from pregnenolone. In the present study, the expression of Mn-SOD mRNA in the ovary began in cells that initiated the synthesis of progesterone. The marked expression of Mn-SOD mRNA observed in the adrenal cortex supports the above hypothesis. Progesterone itself has been reported to be involved in the **ovulation** process. LH-induced Mn-SOD may determine the **ovulating** follicles by triggering progesterone synthesis. The role of SODs as scavenger enzymes has been emphasized in oxygen radical studies. On the other hand, the above results suggest that Mn-SOD or reactive oxygen species are involved in cellular metabolism including steroidogenesis in the ovaries. (author abst.)

8/5/10 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06070653 89160888 PMID: 3231643
The development of over-the-counter (OTC) assays for pregnanediol-3-glucuronide and estrone-B,D-glucuronide.
Bahar I
Progress in clinical and biological research (UNITED STATES) 1988, 285 p139-51, ISSN 0361-7742 Journal Code: 7605701
The development of simple tests for estrone-B,D-glucuronide (E1G) and pregnanediol-3-glucuronide (P3G) in urine is described. The haptens P3G and E1G, coupled to bovine serum albumin (BSA), were used as immunogens against which specific monoclonal antibodies were made by fusion of variants of P3.X63.Ag8.653 with spleen lymphocytes from immunized mice. When covalently bonded to gelatin or BSA and passively adsorbed to a microtiter plate, the hapten provides the solid phase for an ELISA. Peroxidase-labelled monoclonal antibody is premixed with a urine specimen and the mixture is immediately added to the plate. After a brief incubation and washing, a mixture of **tetramethylbenzidine** chromogen and **hydrogen peroxide** is added to serve as substrate and generate **color** . The ELISA can be used to monitor levels of E1G and P3G during menstrual cycles and provides a simple, noninvasive method which can be used in a laboratory. A similar competitive assay can be performed using colloidal gold as the label instead of peroxidase. The replacement of peroxidase by colloidal gold further simplifies the procedure and could be used as the basis for an OTC test.

8/5/11 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04558661 84241345 PMID: 6376666
[Study on the new development of highly sensitive E2-EIA used by two specific binding systems and on the clinical application]
Terada N; Shirotake S; Maekawa I; Kobori T; Takamizawa H

Nippon Sanka Fujinka Gakkai zasshi (JAPAN) May 1984, 36 (5) p763-70, ISSN 0300-9165 Journal Code: 7505749
Languages: JAPANESE

As a tracer, biotin was bound to the amino group of newly synthesized 6-ethylenediamino-17-beta-estradiol. Two competitive methods were developed by using the tracer (E2-B). Method I, E2-B, sample, and anti E2 antibody conjugated with horse radish peroxidase were mixed, and the mixture was added to the avidin immobilized on a microplate to separate free and bound tracer. Then the enzyme activity which remained after washing was measured by using **H2O2** and **o - phenylene**diamine . E2 was quantified from 75 pg/ml to 9.6 ng/ml; (II) E2-B and the samples were added to the anti E2 adsorbed on a microplate. After washing, the avidin conjugated with HRP was put into the immune complex plate, and the enzyme activity which remained was determined to calculate E2. The standard curve indicated E2 from 75 pg/ml to 19.2 ng/ml. The E2 values obtained by the new methods correlated with those by 3H-RIA and the EIA was useful in monitoring the induction of **ovulation** .

8/TI/1 (Item 1 from file: 5)
DIALOG(R)File 5:(c) 2003 BIOSIS. All rts. reserv.

CYTOCHEMICAL DETECTION OF RECEPTORS SPECIFIC FOR N-LINKED OLIGOSACCHARIDES OF GLYCOPROTEINS IN THE MEMBRANE OF THE HUMAN SPERMATOZOON AND THEIR DISTRIBUTION IN THE DIFFERENT ZONES OF THAT MEMBRANE

8/TI/2 (Item 2 from file: 5)
DIALOG(R)File 5:(c) 2003 BIOSIS. All rts. reserv.

QUANTITATIVE IMMUNOCYTOCHEMISTRY OF HYPOTHALAMIC AND PITUITARY HORMONES VALIDATION OF AN AUTOMATED COMPUTERIZED IMAGE ANALYSIS SYSTEM

8/TI/3 (Item 3 from file: 5)
DIALOG(R)File 5:(c) 2003 BIOSIS. All rts. reserv.

ENZYMATIC OXIDATION OF ACETYL TRYPTOPHANAMIDE AND TRYPTOPHAN CONTAINING PEPTIDES FORMATION OF DEHYDRO TRYPTOPHAN

8/TI/4 (Item 4 from file: 5)
DIALOG(R)File 5:(c) 2003 BIOSIS. All rts. reserv.

SIMULTANEOUS VISUALIZATION BY LIGHT MICROSCOPY OF 2 PITUITARY HORMONES IN A SINGLE TISSUE SECTION USING A COMBINATION OF INDIRECT IMMUNO HISTOCHEMICAL METHODS

8/TI/5 (Item 1 from file: 34)
DIALOG(R)File 34:(c) 2003 Inst for Sci Info. All rts. reserv.

Title: DEVELOPMENT OF A SIMPLE, RAPID SANDWICH ENZYME-IMMUNOASSAY FOR THE MEASUREMENT OF SERUM RAT LH

8/TI/6 (Item 2 from file: 34)
DIALOG(R)File 34:(c) 2003 Inst for Sci Info. All rts. reserv.

Title: EFFECTS OF INERT FAT ON ENERGY-BALANCE, PLASMA-CONCENTRATIONS OF HORMONES, AND REPRODUCTION IN DAIRY-COWS

8/TI/8 (Item 2 from file: 73)
DIALOG(R)File 73:(c) 2003 Elsevier Science B.V. All rts. reserv.

Direct enzyme immunoassay of estradiol in serum of women enrolled in an in vitro fertilization and embryo transfer program

```
Set     Items   Description
S1     279678   OVULAT? OR LUTEINIZ? OR LUTEINIS?
S2     221127   HYDROGEN()PEROXIDE OR H2O2
S3    1343839   COLOR? OR COLOUR?
S4    1157698   BENZIDINE OR TETRAMETHYLBENZIDINE OR DIAMINOBENZIDINE OR S-
             ALT? ? OR 3()AMINO()9()ETHYLCARBAZOLE OR 4()METHOXY(2W)NAPHTH-
             OL OR O()(TOLIDINE OR DIANISIDINE OR METHOXYPHENOL OR PHENYLE-
             NEDIAMINE) OR 5()AMINOSALICYLIC OR PYROGALLOL
S5         16   S1 AND S2 AND (S3 OR S4)
S6         11   RD (unique items)
S7         11   S6 NOT PY>1999
S8         11   S7 NOT PD>19990825
? show files
File   2:INSPEC 1969-2003/Mar W2
         (c) 2003 Institution of Electrical Engineers
File   5:Biosis Previews(R) 1969-2003/Mar W2
         (c) 2003 BIOSIS
File   6:NTIS 1964-2003/Mar W3
         (c) 2003 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2003/Mar W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Mar W2
         (c) 2003 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2003/Feb
         (c) 2003 ProQuest Info&Learning
File  65:Inside Conferences 1993-2003/Mar W2
         (c) 2003 BLDSC all rts. reserv.
File  73:EMBASE 1974-2003/Mar W2
         (c) 2003 Elsevier Science B.V.
File  94:JICST-EPlus 1985-2003/Mar W3
         (c)2003 Japan Science and Tech Corp(JST)
File 144:Pascal 1973-2003/Mar W2
         (c) 2003 INIST/CNRS
File 155:MEDLINE(R) 1966-2003/Mar W2
         (c) format only 2003 The Dialog Corp.
File 172:EMBASE Alert 2003/Mar W3
         (c) 2003 Elsevier Science B.V.
File 198:Health Devices Alerts(R) 1977-2003/Mar W3
         (c) 2003 ECRI-nonprft agncy
File 399:CA SEARCH(R) 1967-2003/UD=13812
         (c) 2003 American Chemical Society
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File  48:SPORTDiscus 1962-2003/Mar
         (c) 2003 Sport Information Resource Centre
File  71:ELSEVIER BIOBASE 1994-2003/Mar W3
         (c) 2003  Elsevier Science B.V.
File  91:MANTIS(TM) 1880-2002/Oct
         2002 (c) Action Potential
File 162:CAB Health 1983-2003/Jan
         (c) 2003 CAB International
File 164:Allied & Complementary Medicine 1984-2003/Mar
          (c) 2003 BLHCIS
File 467:ExtraMED(tm) 2000/Dec
         (c) 2001 Informania Ltd.
```

Inventor Search

4/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014073823
WPI Acc No: 2001-558036/200163
XRAM Acc No: C01-166067
XRPX Acc No: N01-414722
Ovulation **test reagent box for natural method contraception - NoAbstract**
Patent Assignee: PENG X (PENG-I)
Inventor: **PENG X**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1152713	A	19970625	CN 95115790	A	19951024	200163	B

Priority Applications (No Type Date): CN 95115790 A 19951024
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1152713	A			G01N-033/52	

Title Terms: **OVULATION** ; TEST; REAGENT; BOX; NATURAL; METHOD; CONTRACEPTIVE; NOABSTRACT
Derwent Class: B04; P31; S03; T01
International Patent Class (Main): G01N-033/52
International Patent Class (Additional): A61B-010/00; G06C-003/00
File Segment: CPI; EPI; EngPI

4/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013663767
WPI Acc No: 2001-147979/200116
XRPX Acc No: N01-108401
Heat-insulating and water-proofing integrated roofing structure of building and its construction method
Patent Assignee: ZHANG Z (ZHAN-I)
Inventor: MING S; **PENG X** ; ZHANG Z
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1272580	A	20001108	CN 99117875	A	19990917	200116	B

Priority Applications (No Type Date): CN 99117875 A 19990917
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1272580	A			E04D-011/02	

Abstract (Basic): CN 1272580 A
NOVELTY - The present invention relates to a roofing structure integrating heat-insulating layer and water-proofing layer into one whole and its construction method. In particular, it is an energy-saving flat roof formed from roof boarding, sloping layer, heat-insulating (vapour barrier and water-proofing) layer and protective layer. The main technique of construction is characterized by laying and adheringheat-insulating layer, firstly the PE board is laid and adhered from one end and from upper portion to lower portion

to form a whole body, if the roofing has the organized drainage, the parapet skirting and drain and vent water-proofing can be made. Said roofing structure is simple in structure, convenient for construction, energy can be saved by 50% and water-proofing **period** can be up to above 50 years.

DwgNo 0/0

Title Terms: HEAT; INSULATE; WATER; PROOF; INTEGRATE; ROOF; STRUCTURE; BUILD; CONSTRUCTION; METHOD
Derwent Class: Q45
International Patent Class (Main): E04D-011/02
File Segment: EngPI

4/5/3 (Item 3 from file: 350)

013430676
WPI Acc No: 2000-602619/200058
XRAM Acc No: C00-180415

Method of bacteria culture preservation

Patent Assignee: BEIJING SANITARY & ANTIEPIDEMIC STATION (BEIJ-N)
Inventor: LU W; **PENG X** ; WU J
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1142535	A	19970212	CN 96105227	A	19960521	200058	B

Priority Applications (No Type Date): CN 96105227 A 19960521
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1142535	A			C12N-001/20	

Abstract (Basic): CN 1142535 A

NOVELTY - A method for storing bacterial strain includes such steps as rolling special cotton ball to take cultured bacterial strain's lawn on it, quickly putting it in treated small tube, and immediately putting the tube in refrigerator at -20 to -30degreesC. Its storage **period** is two years.

DwgNo 0/0

Title Terms: METHOD; BACTERIA; CULTURE; PRESERVE
Derwent Class: B04; D16
International Patent Class (Main): C12N-001/20
International Patent Class (Additional): C12M-001/24; C12M-001/26
File Segment: CPI

4/5/4 (Item 4 from file: 350)

013194582
WPI Acc No: 2000-366455/200032
XRAM Acc No: C00-110871
XRPX Acc No: N00-274100

Ovulation **-testing reagent kit for natural contraception - comprise first reagent comprising benzidines compound and stabilizer, and second reagent comprising hydrogen peroxide solution, swab and measuring glass**

Patent Assignee: PENG X (PENG-I)
Inventor: **PENG X**

Number of Countries: 094 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1247900	A	20000322	CN 99118909	A	19990825	200032	B
WO 200113799	A1	20010301	WO 2000CN226	A	20000808	200114	
AU 200062581	A	20010319	AU 200062581	A	20000808	200136	

Priority Applications (No Type Date): CN 99118909 A 19990825
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1247900	A			C12Q-001/28	
WO 200113799	A1	C		A61B-010/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200062581	A			A61B-010/00	Based on patent WO 200113799

Abstract (Basic): CN 1247900 A
The reagent kit consists of reagent A comprising 1-10% concentration benzidines compound and stabilizer, reagent B of 1-10% concentration hydrogen peroxide solution, swab and measuring glass.
ADVANTAGE - convenient, fast, accurate and stable, it is used in testing **ovulation period** of women for natural contraception and is also suitable for testing **ovulation period** of mammal.
Title Terms: **OVULATION** ; TEST; REAGENT; KIT; NATURAL; CONTRACEPTIVE; COMPRISE; FIRST; REAGENT; COMPRISE; COMPOUND; SECOND; REAGENT; COMPRISE; HYDROGEN; PEROXIDE; SOLUTION; SWAB; MEASURE; GLASS
Derwent Class: B04; D16; P31
International Patent Class (Main): A61B-010/00; C12Q-001/28
International Patent Class (Additional): C12N-001/28; G01N-033/50
File Segment: CPI; EngPI

4/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012599567
WPI Acc No: 1999-405671/199935
XRAM Acc No: C99-119968
Process for preparing bactericide containing silver - includes stirring aqueous solution and adding acid to it
Patent Assignee: JIANG H (JIAN-I)
Inventor: JIANG C; JIANG H; **PENG X**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1214867	A	19990428	CN 97108681	A	19971021	199935	B

Priority Applications (No Type Date): CN 97108681 A 19971021
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1214867	A		1	A01N-059/16	

Abstract (Basic): CN 1214867 A
The preparation of silver-contained bactericide includes: using silver oxide as raw material, adding distilled water, stirring and dropping concentrated acid into it, when its pH is 2 - 3.5, taking

clear liquor and adding hydrogen peroxide so as to obtain the bactericide containing silver ion. Said invention is a simple process, has short production **period** , is higher in the valence state and concentration of the silver ion contained in the bactericide, strong in bactericidal action and extensive in application range.

Dwg.0

Title Terms: PROCESS; PREPARATION; BACTERIA; CONTAIN; SILVER; STIR; AQUEOUS ; SOLUTION; ADD; ACID
Derwent Class: D22; E32
International Patent Class (Main): A01N-059/16
File Segment: CPI

4/5/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

012399426
WPI Acc No: 1999-205533/199918
XRAM Acc No: C99-060048
XRPX Acc No: N99-151394

Vacuum packaging method for desulfurizing agent - for hydrogen sulfide, thiocarbon oxide and carbon disulfide at atmosphere temperature

Patent Assignee: HUBEI CHEM INST (HUBE-N)
Inventor: **PENG X** ; WANG G; WANG X
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1201746	A	19981216	CN 98113487	A	19980330	199918	B

Priority Applications (No Type Date): CN 98113487 A 19980330
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1201746	A		1	B65B-031/02	

Abstract (Basic): CN 1201746 A

A vacuum packing method for ordinary-temp desulfurizing agent of H2S, COS, or CS2 includes such steps as loading the desulfurizing agent into package, pumping out air contained in the package and pores of desulfurizing agent, and filling N2 or CO2, methane, or argon to make the desulfurizing agent protected by inertial gas. Its advantage is long storage **period** without performance reduction.

Dwg.0/0

Title Terms: VACUUM; PACKAGE; METHOD; AGENT; HYDROGEN; OXIDE; CARBON; ATMOSPHERE; TEMPERATURE
Derwent Class: E36; J01; Q31; Q34
International Patent Class (Main): B65B-031/02
International Patent Class (Additional): B65D-081/20
File Segment: CPI; EngPI

4/5/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

011480452
WPI Acc No: 1997-458357/199743
XRAM Acc No: C97-146474

Delicious pickled vegetable liquid

Patent Assignee: PENG X (PENG-I)

Inventor: **PENG X**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1118662	A	19960320	CN 94111730	A	19940511	199743	B

Priority Applications (No Type Date): CN 94111730 A 19940511
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1118662	A			A23L-001/218	

Abstract (Basic): CN 1118662 A

The pickled vegetable liquid comprises edible salt, sugar, gourmet powder, sodium pyrophosphate, potassium sorbate, lactic acid and water. It is suitable for soaking vegetables. The pickled vegetables are crisp, tender and convenient to use, do not become mildewed and have a long preservation **period** .

Title Terms: PICKLE; VEGETABLE; LIQUID
Derwent Class: D13
International Patent Class (Main): A23L-001/218
File Segment: CPI

4/5/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011471588
WPI Acc No: 1997-449495/199742
XRAM Acc No: C97-143480
XRPX Acc No: N97-374456

Stable serial Fullerene negative ion quaternary ammonium salt compound preparation

Patent Assignee: UNIV JILIN (UYJI-N)
Inventor: LI L; **PENG X** ; ZHANG Y
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1117092	A	19960221	CN 94109381	A	19940819	199742	B

Priority Applications (No Type Date): CN 94109381 A 19940819
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1117092	A		11	C25B-003/04	

Abstract (Basic): CN 1117092 A

The compound is prepared by an electrochemical reduction process, using a cationic semi-permeable film as the electrolyser diaphragm to reduce fullerene molecules in organic solvent. A quaternary ammonium salt is used as the reactant material to obtain fullerene negative ion quaternary ammonium salt compound. The supporting electrolyte may be the same quaternary ammonium salt or other conventional electrolyte. Through column chromatographic separation and the reduced pressure distillation in a water bath, a black solid product is obtained.

ADVANTAGE - The compound is stable in air and water for a long **period** .

Dwg.0/1

Title Terms: STABILISED; SERIAL; NEGATIVE; ION; QUATERNARY; AMMONIUM; SALT; COMPOUND; PREPARATION
Derwent Class: E19; J03; L02; X25
International Patent Class (Main): C25B-003/04

File Segment: CPI; EPI

4/5/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011168257
WPI Acc No: 1997-146182/199714
XRAM Acc No: C97-046751
Growth controlling agent for water melon
Patent Assignee: PENG X (PENG-I)
Inventor: **PENG X** ; WEI K
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CN 1090710	A	19940817	CN 94100295	A	19940112	199714	B

Priority Applications (No Type Date): CN 94100295 A 19940112
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CN 1090710	A		1	A01N-065/00	

Abstract (Basic): CN 1090710 A
A growth controlling agent for water melon is prepd. by decocting 18 Chinese-medicinal herbs e.g. herba verbenae officinalis, xanthium fruit, pinellia tuber and astragalus root, filtering to remove residue, adding wheat grains, decocting, concentrating and adding of the juice from another herb. The agent has a long acting **period** , controls vine growing and increases the quantity and quality of water melon.
Title Terms: GROWTH; CONTROL; AGENT; WATER; MELON
Derwent Class: C03
International Patent Class (Main): A01N-065/00
File Segment: CPI

4/5/10 (Item 10 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01270655
OVULATION **DETECTING AGENTS AND THE USE THEREOF**
AGENTS DE DETECTION DE L' OVULATION **ET LEUR UTILISATION**
PATENT ASSIGNEE:
Peng, Xiahong, (3262460), Suite 102, No. 60, Changxin Flat, Xin District, Wuxi City, Jiangsu Province 214028, (CN), (Applicant designated States: all)
INVENTOR:
Peng, Xiahong , Suite 102, No. 60, Changxin Flat, Xin District, Wuxi City, Jiangsu Province 214028, (CN
PATENT (CC, No, Kind, Date): WO 2001013799 010301
APPLICATION (CC, No, Date): EP 2000949047 000808; WO 2000CN226 000808
PRIORITY (CC, No, Date): CN 99118909 990825
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61B-010/00; G01N-033/50; C12N-001/28
CITED PATENTS (WO A): WO 8002596 A ; WO 9221774 A ; FR 2652092 A ; CN 1150178 A ; CN 1152713 A ; US 4614715 A
LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	010425	A1	International application. (Art. 158(1))
Application:	010425	A1	International application entering European phase
Application:	021023	A1	International application. (Art. 158(1))
Appl Changed:	021023	A1	International application not entering European phase
Withdrawal:	021023	A1	Date application deemed withdrawn: 20020326

LANGUAGE (Publication,Procedural,Application): English; English;

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Set     Items   Description
S1        141   E3,E5,E9
S2         11   S1 AND (OVULAT? OR PERIOD? OR MENSTRUAT?)
S3         11   IDPAT (sorted in duplicate/non-duplicate order)
S4         10   IDPAT (primary/non-duplicate records only)
? show files
File 347:JAPIO Oct 1976-2002/Nov(Updated 030306)
         (c) 2003 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2003/Mar W02
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030306,UT=20030227
         (c) 2003 WIPO/Univentio
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200317
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
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FT NPL

8/3,K/3 (Item 3 from file: 442)
DIALOG(R)File 442:AMA Journals

00046720

Reactivity of Epidermal Growth Factor Receptor Monoclonal Antibodies With Human Uterine Tissues (ORIGINAL ARTICLE)

BERCHUCK, ANDREW; SOISSON, ANDREW P.; SOPER, JOHN T.; CLARKE-PEARSON, DANIEL L.; BAST, ROBERT C.; MCCARTY, KENNETH S.
Archives of Pathology and Laboratory Medicine
October, 1989 ; 113: 1155-11581989;

... 1 hour and then incubated for 10 minutes in phosphate-buffered saline with 0.3% **hydrogen peroxide** to neutralize endogenous peroxidase. The slides were fixed in acetone for 10 minutes at room...

... followed by the avidin-peroxidase complex. Finally, the slides were developed with the enzyme substrate **diaminobenzidine** (5 mg/mL) and 0.03% **hydrogen peroxide** . Tissue sections were counterstained with hematoxylin and mounted (Crystal Mount, Lerner Laboratories, Pittsburgh, Pa).
Immunohistochemical...
...was no relationship between menstrual phase and reactivity with MAB 29.1 among the 15 **ovulatory** patients.
Staining was seen in 19 of 20 uterine tissue samples using MAB 528 (Figure...

... bottom right, is not easily discernible in this black-and-white photomicrograph. Among the 15 **ovulatory** patients in this study, 8 were in the proliferative (follicular) phase and 7 were in...

... patients were all found to stain in a similar fashion to those from the 14 **ovulat**ory patients in which staining was seen.

COMMENT
Peptide growth factors and their cell membrane receptors...

8/3,K/4 (Item 4 from file: 442)
DIALOG(R)File 442:AMA Journals

00043073

Human Chorionic Gonadotropin Expression in Lung, Breast, and Renal Carcinomas (ORIGINAL ARTICLE)

KUIDA, CHRISTINE A.; BRAUNSTEIN, GLENN D.; SHINTAKU, PETER; SAID, JONATHAN W.
Archives of Pathology and Laboratory Medicine
March, 1988; 112: 282-2851988;

...to tap water. Endogenous peroxidase activity was blocked by treating the slides with fresh 3% hydrogen peroxide in absolute methanol for 15

minutes. Following tap water washing, the tissues were treated with...

... National Hormone and Pituitary Program, National Institutes of Health, Bethesda, Md) and 39 ng of **luteinizing** hormone/follicle-stimulating hormone (LER 907, National Institutes of Health). Following incubation and rinsing, biotinylated...
... antiperoxidase (Dako) was used for the PAP series. Following additional incubation and rinsing, 0.05% **diaminobenzidine** , 0.03% **hydrogen peroxide** was added to the tissues for five minutes following rinsing in PBS and tap water...method, theoretically, has a greater sensitivity over the PAP method due to amplification of the **color** signal by large complexes of avidin-biotin-horseradish peroxidase and reduced potential for nonspecific immunoglobulin...
CITED REFERENCES:
...Pathol 1985;84:687-696.

15. Jagiello G, Mesa-Tejada R: Cross-reactivity of human **luteinizing** hormone (beta-subunit) and a serine protease demonstrated by immunoperoxidase staining in human oocytes. Endocrinology...

8/3,K/6 (Item 6 from file: 442)
DIALOG(R)File 442:AMA Journals

00036795

New Developments in Immunoperoxidase Techniques and Their Application (SPECIAL ARTICLE)

FALINI, BRUNANGELO
Archives of Pathology and Laboratory Medicine
March, 1983; 107: 105-1171983;

... techniques use either horseradish peroxidase with different substrate-chromogen systems (Ref. 3) to produce contrasting **colors** , or different enzymes (horseradish peroxidase, alkaline phosphatase, glucose oxidase) with their corresponding distinctively **colored** reaction products. (Ref. 41-44) These methods have some advantages over analogous "double immunofluorescence techniques...

...antibodies is dissociated (Ref. 3,45,46) (after development of the first peroxidase reaction with **hydrogen peroxide** ad the chromogen) without removing the **colored** peroxidase reaction product (brown with **diaminobenzidine** tetrahydrochloride). The staining procedure is then repeated with a primary antibody of different specificity, followed...

... and another chromogen, usually 4-chloro-1-naphthol, resulting in a reaction product of different **color** . More recently, Sternberger (Ref. 47) found that two antigens may be identified in the same...xylol-

... or surface antigens present in different cellular populations but, by the formation of a mixed, **colored** reaction, also permit ... immunostaining. For example, Joseph and Sternberger (Ref. 135,136) demonstrated that adrenocorticotropic hormone and beta- **luteinizing** hormone are located in the same pars intermedia cells of the pituitary and

are probably...in endogenous peroxidase, particularly when the usual method for blocking endogenous peroxidase activity (methyl alcohol- **hydrogen peroxide**) cannot be used because of its adverse effects on some cell surface antigens. (Ref. 145...

CITED REFERENCES:

...Masson Publications USA Inc, 1980, vol 1, pp 15-49.

8/TI/1 (Item 1 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Herbal Remedies in Psychiatric Practice (ARTICLE)

8/TI/2 (Item 2 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Histologic and Immunohistochemical Evidence for Considering Ovarian Myxoma as a Variant of the Thecoma-Fibroma Group of Ovarian Stromal Tumors (ARTICLE)

8/TI/5 (Item 5 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Immunohistochemical Localization of Chromogranin in Human Hypophyses and Pituitary Adenomas (ORIGINAL ARTICLE)

8/TI/7 (Item 7 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Immunohistochemical Localization of Neuron-Specific Enolase in the Human Hypophysis and Pituitary Adenomas (ORIGINAL ARTICLE)

8/TI/8 (Item 8 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Cellular Immunity to Sperm in Infertile Women (ORIGINAL CONTRIBUTIONS)

8/TI/9 (Item 1 from file: 444)
DIALOG(R)File 444:(c) 2003 Mass. Med. Soc. All rts. reserv.

An Aromatase-Producing Sex-Cord Tumor Resulting In Prepubertal Gynecomastia (Brief Report)

8/TI/10 (Item 2 from file: 444)
DIALOG(R)File 444:(c) 2003 Mass. Med. Soc. All rts. reserv.

Clinical and Pathological Features and Laboratory Confirmation of Creutzfeldt-Jakob Disease in a Recipient of Pituitary-Derived Human Growth Hormone (Medical Intelligence)

8/TI/11 (Item 1 from file: 98)
DIALOG(R)File 98:(c) 2003 The HW Wilson Co. All rts. reserv.

Effect of neonatal exposure to estrogenic compounds on development of the excurrent ducts of the rat testis through puberty to adulthood.

8/TI/12 (Item 1 from file: 149)
DIALOG(R)File 149:(c) 2003 The Gale Group. All rts. reserv.

Hormonal contraception, vitamin A deficiency, and other risk factors for shedding of HIV-1 infected cells from the cervix and vagina.

8/TI/13 (Item 2 from file: 149)

Neural tube defects in embryos of diabetic mice: role of the Pax-3 gene and apoptosis.

8/TI/14 (Item 3 from file: 149)

A practical approach to hirsutism. (includes patient information sheet)

8/TI/15 (Item 4 from file: 149)

Pulsatile insulin secretion from isolated human pancreatic islets.

8/TI/16 (Item 5 from file: 149)

Autocrine or paracrine inflammatory actions of corticotropin-releasing hormone in vivo.

8/TI/17 (Item 6 from file: 149)

Your role in radiation therapy.

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Set     Items   Description
S1       4954   OVULAT? OR LUTEINIZ? OR LUTEINIS?
S2       6561   HYDROGEN()PEROXIDE OR H2O2
S3      99842   COLOR? OR COLOUR?
S4      42602   BENZIDINE OR TETRAMETHYLBENZIDINE OR DIAMINOBENZIDINE OR S-
             ALT? ? OR 3()AMINO()9()ETHYLCARBAZOLE OR 4()METHOXY(2W)NAPHTH-
             OL OR O()(TOLIDINE OR DIANISIDINE OR METHOXYPHENOL OR PHENYLE-
             NEDIAMINE) OR 5()AMINOSALICYLIC OR PYROGALLOL
S5         20   S1 AND S2 AND (S3 OR S4)
S6         19   RD (unique items)
S7         18   S6 NOT PY>1999
S8         17   S7 NOT PD>19990825
? show files
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Mar W2
         (c) 2003 ESPICOM Bus.Intell.
File 442:AMA  Journals 1982-2003/Jun B3
         (c)2003 Amer Med Assn -FARS/DARS apply
File 444:New England Journal of Med. 1985-2003/Mar W3
         (c) 2003 Mass. Med. Soc.
File  95:TEME-Technology & Management 1989-2003/Feb W4
         (c) 2003 FIZ TECHNIK
File  98:General Sci Abs/Full-Text 1984-2003/Feb
         (c) 2003 The HW Wilson Co.
File 135:NewsRx Weekly Reports 1995-2003/Mar W1
         (c) 2003 NewsRx
File 149:TGG Health&Wellness DB(SM) 1976-2003/Mar W1
         (c) 2003 The Gale Group
File 369:New Scientist 1994-2003/Mar W1
         (c) 2003 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
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FT Patents

10/5,K/12 (Item 12 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00503080
TOTAL GONADOTROPAL ALPHA PEPTIDE CHAIN ASSAY
NACHWEISVERFAHREN FUR DEN TOTALGEHALT AN GONADOTROPEN ALPHA-PEPTIDKETTEN
DOSAGE DE LA TENEUR TOTALE EN CHAINES PEPTIDIQUES ALPHA GONADOTROPES
PATENT ASSIGNEE:
Hygeia Sciences, Inc., (822650), 330 Nevada Street, Newton Massachusetts 02160-1432, (US), (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)
INVENTOR:
CLOUGH, Kathleen, M., 36 Spruce Street, Acton, MA 01720, (US)
COLE, Francis, X., 75 Kirkland Drive, Stow, MA 01775, (US)
LEGAL REPRESENTATIVE:
Bizley, Richard Edward et al (28352), Hepworth, Lawrence, Bryer & Bizley Merlin House Falconry Court Baker's Lane, Epping Essex CM16 5DQ, (GB)
PATENT (CC, No, Kind, Date): EP 537154 A1 930421 (Basic)
EP 537154 A1 931118
EP 537154 B1 960605
WO 9115594 911017
APPLICATION (CC, No, Date): EP 91907306 910329; WO 91US2121 910329
PRIORITY (CC, No, Date): US 505307 900405
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: C12Q-001/00; **G01N-033/76** ; **G01N-033/543**
CITED PATENTS (EP A): US 4196123 A; WO 8304312 A
CITED REFERENCES (EP A):
BIOLOGICAL ABSTRACTS vol. 88, no. 11 , 1989, Philadelphia, PA, US; abstract no. 118277, M. S. BALIN ET AL. 'Evaluation of the human gonadotroph free alpha-subunit secretory pools by administration of gonadotropin hormone-releasing hormone into normal subjects at different phases of the ovarian cycle.' page AB-338 ;
BIOLOGICAL ABSTRACTS vol. 88, no. 5 , 1989, Philadelphia, PA, US; abstract no. 48241, C. RIVIER ET AL. 'Immunoneutralization of endogenous inhibin modifies hormone secretion and ovulation rate in the rat.' page AB-337 ;;
NOTE:
No A-document published by EPO
LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	930421	A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	930421	A1	Date of filing of request for examination: 921028
Change:	931110	A1	Obligatory supplementary classification (change)
Search Report:	931118	A1	Drawing up of a supplementary European search report: 930929
Examination:	950208	A1	Date of despatch of first examination report: 941222
Grant:	960605	B1	Granted patent
*Assignee:	960710	B1	Proprietor of the patent (transfer of rights): Hygeia Sciences, Inc. (822651) c/o Carter-Wallace, Inc., 1345 Avenue of the Americas New York, New York 10105 (US) (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)

*Assignee: 960710 B1 Previous applicant in case of transfer of rights (change): Hygeia Sciences, Inc. (822650) 330 Nevada Street Newton Massachusetts 02160-1432 (US) (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)
Oppn None: 970528 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION in mammalian body fluids and in particular to assays for determining and/or detecting the **luteinizing** hormone surge which results in rupture of the preovulatory follicle and release of the ovum at **ovulation** . More particularly, the invention relates to the use of total gonadotropal alpha peptide chain content in urine as an enhanced indicator of **luteinizing** hormone content. Even more particularly, the invention relates to an immunoassay suitable for testing for...

...discovered that the traditional mid cycle surge of intact LH in the system that triggers **ovulation** is accompanied by a contemporaneous surge in the total level of gonadotropal alpha peptide chains...using two solutions. The first, TMB solution, is prepared by adding 4.75 g of **tetramethylbenzidine** to 3.8 L of methanol. This solution should be protected from light. The second...

...75.27 g sodium phosphate dibasic, 0.31 g sodium stannate, 5.2 mL 30% **hydrogen peroxide** and 0.26 g thimerosal in sufficient purified water to bring the total volume to...

10/5,K/17 (Item 17 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00387812
Reagent for immunoassay, and device using the same.
Reagenz fur Immuntestverfahren und Gerat zur Verwendung davon.
Reactif d'essai immunologique et dispositif a cet effet.
PATENT ASSIGNEE:
MOCHIDA PHARMACEUTICAL CO., LTD., (469262), 7, Yotsuya 1-chome, Shinjuku-ku Tokyo 160, (JP), (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)
INVENTOR:
Sato, Hiroshi, 3-201, 3-1-1, Sakurada, Washimiya-cho, Kitakatsushika-gun, Saitama, (JP)
Yamauchi, Tadakazu, 2-10-16, Hon-cho, Kawaguchi-shi, Saitama, (JP)
Izako, Toshio, 23-1, Kitami 4-chome, Setagaya-ku Tokyo, (JP)
Nobuhara, Masahiro, 572-10, Yajuro Koshigaya-shi, Saitama, (JP)
Mochida, Ei, 5-4, Komagome 2-chome, Toshima-ku Tokyo, (JP)
LEGAL REPRESENTATIVE:
Henkel, Feiler, Hanzel & Partner (100401), Mohlstrasse 37, D-8000 Munchen 80, (DE)
PATENT (CC, No, Kind, Date): EP 383313 A2 900822 (Basic)
EP 383313 A3 921125
APPLICATION (CC, No, Date): EP 90102909 900214;
PRIORITY (CC, No, Date): JP 8935815 890215
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: **G01N-033/74** ; **G01N-033/557** ; **G01N-033/58** ;

G01N-033/574 ; G01N-033/543 ; G01N-033/76 ; G01N-033/532
CITED PATENTS (EP A): EP 88974 A
CITED REFERENCES (EP A):
PATENT ABSTRACTS OF JAPAN vol. 11, no. 378 (P-645)(2825) 10 December 1987
PATENT ABSTRACTS OF JAPAN vol. 11, no. 386 (P-647)(2833) 17 December 1987
;

ABSTRACT EP 383313 A2
A reagent for use in an immunoassay for measuring haptens, antigens or antibodies by means of a competitive binding method, which comprises a combination of an antibody and a labelled hapten or a labelled antigen or a combination of a hapten or an antigen and a labelled antibody, wherein the antibody and the labelled hapten or the labelled antigen in one combination or the hapten or the antigen and the labelled antibody in another combination are capable of undergoing reversible binding, and a device for use in an immunoassay wherein the reagent of the present invention is included in a single container.
An immunoassay can be performed in a short time by the use of the immunoassay device of the present invention.
ABSTRACT WORD COUNT: 126

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	900822	A2	Published application (A1with Search Report ;A2without Search Report)
Search Report:	921125	A3	Separate publication of the European or International search report
Examination:	930331	A2	Date of filing of request for examination: 930121
Examination:	940727	A2	Date of despatch of first examination report: 940610
Refusal:	961002	A2	Date on which the European patent application was refused: 960513

LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION the present invention can also be used for the measurement of antigens, such as a **luteinizing** hormone (LH), a thyroid-stimulating hormone (TSH), a human chronic gonadotropin (hCG) and a carcinoembryonic ...to a monitor system of the female gonadal functions, especially maturation of ovarian follicles and **ovulation** .

The antibody for use in the measurement of estradiol may be obtained by immunizing an...process. Thereafter, the enzyme (peroxidase) reaction was performed for 10 minutes in the presence of **hydrogen peroxide** as the substrate and orthophenylenediamine as the **color** reagent and then the absorbance of the **colored** solution was measured.

The solution containing the peroxidase-labelled estrogen derivative was added to another...process. Thereafter, the enzyme (peroxidase) reaction was performed for 10 minutes in the presence of **hydrogen peroxide** as the substrate and orthophenylenediamine as the **color** reagent and then the absorbance of the **colored** substance was measured.

To another glass tube in which the purified monoclonal anti-estradiol antibody...

10/5,K/21 (Item 21 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00335217

Positive step immunoassay.

Schwellwertimmunoassay.

Essai immunologique a seuil defini.

PATENT ASSIGNEE:
Hygeia Sciences, Inc., (822650), 330 Nevada Street, Newton Massachusetts 02160-1432, (US), (applicant designated states: BE;DE;ES;FR;GB;IT;NL;SE)
INVENTOR:
Bahar, Izak, 34 Bryon Road Apartment No. 3, Chestnut Hill Massachusette 02167, (US)
LEGAL REPRESENTATIVE:
Bizley, Richard Edward (28351), BOULT, WADE & TENNANT 27 Furnival Street, London EC4A 1PQ, (GB)

PATENT (CC, No, Kind, Date): EP 327843 A1 890816 (Basic)
EP 327843 B1 930818
APPLICATION (CC, No, Date): EP 89100758 890118;
PRIORITY (CC, No, Date): US 153081 880208
DESIGNATED STATES: BE; DE; ES; FR; GB; IT; NL; SE
INTERNATIONAL PATENT CLASS: **G01N-033/53 ; G01N-033/74 ; G01N-033/553**
CITED PATENTS (EP A): EP 114614 A; CA 1183080 A; GB 2029011 A; EP 86095 A; EP 158746 A

ABSTRACT EP 327843 A1

An assay procedure that is particularly valuable for detecting and/or determining the presence of threshold levels of analyte ligands in biological fluids. In one particularized and specialized aspect the disclosure is directed to procedures for detecting and/or determining threshold levels of hormone metabolites such as pregnanediol-3-glucuronide (P(sub 3)G) and estrone-3-glucuronide (E(sub 1)3G) in human urine. The assay consists of contacting a sample containing the analyte with a known amount of an antibody thereto and with a calibrated amount of the analyte itself that is conjugated to said solid support. When the level of the analyte in the sample exceeds a threshold level, such as 5 ug/ml for P(sub 3)G, the antibody will be insufficient to block all of the corresponding analyte on the solid support. Thus, upon addition of labelled antibody to the assay system, a detectable immunoreaction product becomes attached to the support to indicate that the amount of analyte in the sample exceeds the threshold level. On the other hand, if the level of the analyte in the sample is below the threshold amount, the free antibody will be sufficient to block all of the corresponding analyte on the solid support preventing labelled antibody from forming a detectable immunoreaction product on the support and thus no signal will appear.

ABSTRACT WORD COUNT: 215

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	890816	A1	Published application (A1with Search Report ;A2without Search Report)
Change:	900328	A1	Representative (change)
Examination:	900411	A1	Date of filing of request for examination: 900212
Examination:	920408	A1	Date of despatch of first examination report: 920225
Grant:	930818	B1	Granted patent
Oppn None:	940810	B1	No opposition filed

LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION detecting the presence of threshold levels of hormones such as progestin and estrogen derivatives and **luteinizing** hormone (LH) in human urine samples. The invention also relates to kits of materials for...hormones from the female glands and organs. Such release is predictable and specifically related to **ovulation** by which ova are released from the ovaries and the lining of the uterus is...

...E(sub 1)3G) in female urine begins to rise about 6 days prior to **ovulation** and reaches its peak about 1 day before **ovulation** and falls rapidly during and after **ovulation** . The level of pregnanediol-3-glucuronide (P(sub 3)G) in female urine begins to rise on the day of **ovulation** , and reaches a peak 2 to 3 days after **ovulation** and remains elevated for the duration of the luteal phase. Likewise, the relationship between P...

...amount of P(sub 3)G in urine would be extremely valuable in determining whether **ovulation** has occurred.

The positive step immunoassay procedure of the present invention addresses each of the...the liquid sample (for example, the threshold level of P(sub 3)G indicating that **ovulation** has occurred) and no signal at a lower level. Since the physiological detection of P...to make sure that all non-specifically bound HRP is removed. 50 ul of a **color** developing substrate solution comprising a fresh mixture of 3 ml. of 0.125% **tetramethylbenzidine** in methanol and 7 ml. of 0.03% **hydrogen peroxide** in a 0.1 M phosphate and 50 mM citric acid aqueous solution (pH 5 allowed to react for 5 minutes at room temperature. The intensity of the **color** formation was read on a Dynatech plate reader (Dynatech, Virginia) at 630 nm with a...and E(sub 1)3G assays of the present invention may be used to predict **ovulation** in advance, verify **ovulation** , assess luteal function, detect the beginning and end of the fertile period assess follicular phase to measure the increase in P(sub 3)G in FMU during **ovulation** and during the luteal phase and can be calibrated to provide a positive color indication...

10/5,K/23 (Item 23 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00271578
Monoclonal antibodies.
Monoklonale Antikorper.
Anticorps monoclonaux.
PATENT ASSIGNEE:
Bunge (Australia) Proprietary Limited, (789581), 6th Floor 616 St. Kilda Road, Melbourne Victoria 3004, (AU), (applicant designated states: AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)
INVENTOR:
Mountford, Peter Scott, 45 Waterloo Crescent, St. Kilda Victoria, (AU)
LEGAL REPRESENTATIVE:
Harding, Richard Patrick et al , Arthur R. Davies & Co. 27 Imperial Square, Cheltenham GL50 1RQ, (GB)
PATENT (CC, No, Kind, Date): EP 265156 A2 880427 (Basic)
EP 265156 A3 900829
APPLICATION (CC, No, Date): EP 87309057 871014;
PRIORITY (CC, No, Date): AU 868482 861014; AU 869525 861216
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: C12P-021/00; C12N-015/00; C12N-005/00;

G01N-033/577 ; **G01N-033/76** ; A61K-037/24; A61K-039/395; A61K-049/00
CITED PATENTS (EP A): US 4565687 A; EP 151030 A; EP 107551 A

ABSTRACT EP 265156 A2
A monoclonal antibody against equine chorionic gonadotrophin produced from a continuous cell line which produces a monoclonal antibody against equine chorionic gonadogrophin, including a hybridoma formed by fusina a B cell capable of producing antibodies against equine chorionic gonadotrophin with a myeloma cell and its use in purifying equine chorionic gonadotrophin and modifying the biological activity of equine chorionic gonadotrophin.
ABSTRACT WORD COUNT: 64

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	880427 A2	Published application (A1with Search Report ;A2without Search Report)
Search Report:	900829 A3	Separate publication of the European or International search report
Examination:	910109 A2	Date of filing of request for examination: 901113
Examination:	910821 A2	Date of despatch of first examination report: 910704
Withdrawal:	940126 A2	Date on which the European patent application was deemed to be withdrawn: 930803

LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION hCG).
eCG has a potent, dual LH-FSH bioactivity capable of inducing follicular growth and **ovulation** when injected into a wide range of domestic animals. The hormone has a particularly long...

...This may be given before antibpdy administration and about 24 hours before the time of **ovulation** .
The use of monoclonal antibodies for controlling eCG in vivo whether for use in superovulation...sup ,)-diaminobenzidine tetrachloride in 250ml 0.01M citrate buffer, pH 5, plus 250ul of 30% **hydrogen peroxide** added immediately prior to use. Within 10 minutes the reaction was stopped by rinsing in...ewes is also accompanied by a rise in the numbers of corpora lutea and therefor **ovulations** .
The use of the monoclonal antibody has increased the **ovulation** rate and reduced the number of undesirable large follicles.
EXAMPLE 5
Five doses of a...

10/5,K/29 (Item 29 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00235526
IMMUNOASSAY METHOD AND KIT.
IMMUNTESTVERFAHREN UND SATZ.
KIT ET PROCEDE D'ANALYSE IMMUNOLOGIQUE.
PATENT ASSIGNEE:
BIOMETALLICS INC., (850840), P.O. Box 2251, Princeton Junction, NJ 08550, (US), (applicant designated states: AT;BE;CH;DE;FR;GB;IT;LI;LU;NL;SE)

INVENTOR:
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KUEHN, Christa, G., 37-C Station Drive, Princeton Junction, NJ 08550, (US)
ROSSI, Debra, J., 399 Lenape Lane, Yardley, PA 19067, (US)
LEGAL REPRESENTATIVE:
KOHLER SCHMID + PARTNER Patentanwalte et al (100201), Ruppmannstrasse 27, W-7000 Stuttgart 80, (DE)
PATENT (CC, No, Kind, Date): EP 238631 A1 870930 (Basic)
EP 238631 A1 890809
EP 238631 B1 930317
WO 8701811 870326
APPLICATION (CC, No, Date): EP 86906108 860919; WO 86US1944 860919
PRIORITY (CC, No, Date): US 778554 850920
DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: **G01N-033/535** ; **G01N-033/547** ; **G01N-033/74**
CITED PATENTS (EP A): DE 2736684 A
CITED PATENTS (WO A): US 3888629 A; US 4280816 A; US 4517288 A; WO 8505451 A
CITED REFERENCES (EP A):
See also references of WO8701811;
CITED REFERENCES (WO A):
The Journal of Biological Chemistry, Vol. 255, No. 2, issued January 25, 1980 (WILLIAMS & WILKINS Co., Baltimore, Md 212202), E.O'KEEFE et al., "Use of Immunoglobulin-Loaded Protein A....", pages 561-568, see page 562, column 1, Lines 11-28; page 563, column 1, Lines 1-13, 23-28; page 5688 column 1, Lines 24-28.
IDEM
The Journal of Laboratory and Clinical Medicine, Vol. 98, No. 1, issued July 1981, (C.V. MOSBY Co., St. Louis, MO. 63141), J. JUNGERS et al. "A Simple and Rapid Radioimmunoassay....", pages 30-36, see Abstract.
The Journal of Immunology, Vol. 117, No. 5, Part 1, issued November 1976 (WILLIAMS & WILKINS Co., Baltimore, Md 21202) S.W. KESSLER, "Cell Membrane Antigen Isolation...", pages 1482-1490, see page 1483, column 1, Lines 10-30.
The Lancet, Vol. 1 for 1985, issued January 5, 1985 (London, WC2N GAD England) R.J. NORMAN et al., "Dipstick Method for Human Chorionic Gonadotropin...", pages 19-20, see page 19, column 2, Lines 31-38.
Clinical Chemistry, Vol. 31, No. 9, issued September 1985 (Winston-Salem, NC 27107) G.E. VALKIRS et al, "Immunoconcentration- A New Format for Solid-Phase Immu noassays", pages 1427-1431, see Abstract; page 1427, column 2, Lines 4-23;
NOTE:
No A-document published by EPO
LEGAL STATUS (Type, Pub Date, Kind, Text):

Lapse:	20000209 B1	Date of lapse of European Patent in a contracting state (Country, date): AT 19930317, BE 19930317, CH 19930317, LI 19930317, LU 19930930, NL 19930317, SE 19930317,
Application:	870930 A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	870930 A1	Date of filing of request for examination: 870526
Search Report:	890809 A1	Drawing up of a supplementary European search report: 890621

Change:	900404	A1	Representative (change)
Examination:	910220	A1	Date of despatch of first examination report: 901227
Grant:	930317	B1	Granted patent
Lapse:	931110	B1	Date of lapse of the European patent in a Contracting State: CH 930317, LI 930317, NL 930317
Lapse:	931110	B1	Date of lapse of the European patent in a Contracting State: CH 930317, LI 930317, NL 930317
Lapse:	931110	B1	Date of lapse of the European patent in a Contracting State: CH 930317, LI 930317, NL 930317
Lapse:	931118	B1	Date of lapse of the European patent in a Contracting State: CH 930317, LI 930317, NL 930317, SE 930317
Lapse:	931124	B1	Date of lapse of the European patent in a Contracting State: BE 930317, CH 930317, LI 930317, NL 930317, SE 930317
Oppn None:	940309	B1	No opposition filed
Lapse:	940622	B1	Date of lapse of the European patent in a Contracting State: AT 930317, BE 930317, CH 930317, LI 930317, NL 930317, SE 930317

LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION the placenta during pregnancy.

The lowest progesterone level in animals corresponds to estrus (time of **ovulation**) and the highest progesterone level occurs near the midpoint of a normal ovarian cycle.

During...benzidene (TMB) (2 mmol/(liters)) and nicotinamide adenine dinucleotide (NADH) (0.4 mmol/(liters)) with **hydrogen peroxide** (2 mmol/(liters)) was added to develop the test **color** and these results illustrated in Figure 6.

No background color occurs at the high progesterone...

10/5,K/33 (Item 33 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

00917432

SELENO-CYSTEINE CONTAINING PROTEIN ZSEL1

PROTEINE ZSEL1 CONTENANT DE LA SELENOCYSTEINE

Patent Applicant/Assignee:
ZYMOGENETICS INC, 1201 Eastlake Avenue East, Seattle, Wa Washington 98102 , US, US (Residence), US (Nationality)

Inventor(s):
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BISHOP Paul D, 28425 SE 8th St., Fall City, WA 98024, US,

Legal Representative:
JONES Philip B C (agent), ZymoGenetics, Inc., 1201 Eastlake Avenue East, Seattle, WA 98102, US,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200250274 A2 20020627 (WO 0250274)
Application: WO 2001US48769 20011212 (PCT/WO US0148769)
Priority Application: US 2000256685 20001218

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU

Bad Data

CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO
RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: C12N-015/12
International Patent Class: C07K-014/46; C07K-016/18; C12Q-001/68;
G01N-033/53
Publication Language: English
Filing Language: English

English Abstract
Novel zsel1 polypeptides, polynucleotides encoding the polypeptides, and related compositions and methods are disclosed. Also disclosed are antibodies to the zsel1 protein or fragments thereof.

Legal Status (Type, Date, Text)
Publication 20020627 A2 Without international search report and to be republished upon receipt of that report.

...International Patent Class: **G01N-033/53**
Fulltext Availability:
Detailed Description

Detailed Description
... Sigma)) I.P. to induce superovulation. Donors are mated with studs subsequent to hormone injections. **Ovulation** generally occurs within 13 hours of hCG injection.

Copulation is confirmed by the presence of...detection antibody can be horseradish peroxidase, a commonly used enzyme that acts upon the substrate **hydrogen peroxide** . The reduction of peroxide by the enzyme is achieved by hydrogen donors that can be measured after oxidation as a **color** change.

Commonly used chemicals for this are O-phenylene diam ine (OPD) and tetrarnethlybenzidine (TMB...

10/5,K/36 (Item 36 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00864156
NUCLEOTIDE AND AMINO ACID SEQUENCES OF OOCYTE FACTORS FOR ALTERING OVARIAN FOLLICULAR GROWTH IN VIVO OR IN VITRO
Patent Applicant/Assignee:
AGRESEARCH LIMITED, Ruakura Campus, East Street, Hamilton, NZ, NZ (Residence), NZ (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
LAITINEN Mika Petri Esaias, Tarkk ampujankatu 14 B 46, FIN-00150 Helsinki , FI, FI (Residence), FI (Nationality)
RITVOS Olli Visa-Pekka, Visakoivuntie 10 G 13, FIN-02130 Espoo, FI, FI (Residence), FI (Nationality)
DAVIS George Henry, Invermay Agricultural Centre, Private Bag 50034, Mosgiel, Dunedin, NZ, NZ (Residence), NZ (Nationality), (Designated

Bad Date

only for: US)
GALLOWAY Susan May, AgResearch Molecular Biology Unit, Department of Biochemistry, University of Otago, P.O. Box 56, Dunedin, NZ, NZ (Residence), NZ (Nationality), (Designated only for: US)
JUENGEL Jenny, Wallaceville Animal Research Centre, P.O. Box 40063, Upper Hutt, NZ, US (Residence), US (Nationality), (Designated only for: US)
MCNATTY Kenneth Pattrick, Wallaceville Animal Research Centre, P.O. Box 40063, Upper Hutt, NZ, NZ (Residence), NZ (Nationality), (Designated only for: US)
VUOJOLAINEN Kaisa Niina Johanna, Koskelantie 23 H 67, FIN-00610 Helsinki, FI, FI (Residence), FI (Nationality), (Designated only for: US)

Legal Representative:
WILSON Kathryn S (et al) (agent), KPMG Centre, Level 12, 85 Alexandra Street, Private Bag 3140, Hamilton, NZ,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200196393 A2-A3 20011220 (WO 0196393)
Application: WO 2001NZ113 20010615 (PCT/WO NZ0100113)
Priority Application: NZ 502796 20000615

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: C07K-014/51

International Patent Class: A61P-015/08; C12N-015/12; C12N-015/00; C12N-005/10; A61K-038/18; C07K-016/22; A61K-048/00; A01K-067/027; **G01N-033/74**

Publication Language: English

Filing Language: English

English Abstract
The present invention relates to nucleotide and amino acid sequences of oocyte factors for altering ovarian follicular growth in vivo or in vitro. The present invention also concerns novel homodimeric and heterodimeric polypeptides and their use for altering mammalian ovarian follicular growth in vivo or in vitro. In particular, the invention broadly concerns active or passive immunisation against these homo- or heterodimeric polypeptides or functional fragments or variants thereof so as to alter follicular growth in vivo or in vitro.

Legal Status (Type, Date, Text)

Publication	20011220	A2 Without international search report and to be republished upon receipt of that report.
Search Rpt	20020808	Late publication of international search report
Republication	20020808	A3 With international search report.
Search Rpt	20020808	Late publication of international search report
Correction	20021128	Corrected version of Pamphlet: page 24, sequence listing, added
Republication	20021128	A3 With international search report.
Examination	20030227	Request for preliminary examination prior to end of 19th month from priority date

Detailed Description
... antral follicles) has been poorly understood. On the other hand,

follicle-stimulating hormone (FSH) and **luteinising** hormone are glycoprotein hormones derived from the pituitary and have generally been accepted as the...

...the single most important factor for stimulating a greater than normal number of follicles to **ovulate** , a fact that is well illustrated by the wide use of commercial FSH preparations in...

...added for 1 h at 37'C. The wells were then washed and developed with **o - phenylenediamine** plus **hydrogen peroxide** with development being stopped with sulphuric acid.

The ewes were each given 100 ml of...

10/5,K/43 (Item 43 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00805310 **Image available**
DEVICES AND METHODS FOR DETECTING ANALYTES USING ELECTROSENSOR HAVING CAPTURE REAGENT

Bad Date

Patent Applicant/Assignee:
BIOTRONIC TECHNOLOGIES INC, Suite H, 4206 Sorrento Valley Boulevard, San Diego, CA 92121, US, US (Residence), US (Nationality)
Inventor(s):
ZHANG Honghua, 12865 Caminito Diego, San Diego, CA 92130, US,
Legal Representative:
CHEN Peng (et al) (agent), Morrison & Foerster LLP, Suite 500, 3811 Valley Centre Drive, San Diego, CA 92130-2332, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200138873 A2-A3 20010531 (WO 0138873)
Application: WO 2000US29748 20001027 (PCT/WO US0029748)
Priority Application: US 99167409 19991124
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G01N-033/543**
Publication Language: English
Filing Language: English

English Abstract
The present invention relates to devices comprising electrosensors containing capture reagents, their preparation thereof, and their use for detecting preferably, quantitative measurement, of analyte in a liquid sample. In particular, the invention relates to an enzyme electrosensor, e.g., electroimmunosensor, device for electrochemical detection and preferably, real-time measurement, which is suitable for use at point-of-care settings by unskilled personnel.

Legal Status (Type, Date, Text)

Publication 20010531 A2 Without international search report and to be republished upon receipt of that report.
Examination 20010920 Request for preliminary examination prior to end of 19th month from priority date
Search Rpt 20020711 Late publication of international search report
Republication 20020711 A3 With international search report.

Detailed Description
... used for detection of pregnancy, strep throat, and bacteria, as well as for prediction of **ovulation** . Examples of such assays are described in U.S. Patent Nos. 5,622,871, 4703...a label, when other necessary current-generating component(s) is provided. For example, horseradish peroxidase, **hydrogen peroxide** and at least one electron transfer mediator(s), such as ferrocene, or a derivative thereof, benzoquinone, ascorbic acid or 3, 3', 5, 5' **tetramethylbenzidine** , are needed to generate electrocurrent. Any one or two, but not all three, of the horseradish peroxidase, **hydrogen peroxide** and electron transfer mediator can be used as such a label(s).

As used herein...used. In a specific embodiment, the enzyme is horseradish peroxidase and the enzymatic substrate is **hydrogen peroxide** and the electron transfer mediator is ferrocene, or a derivative thereof, benzoquinone, ascorbic acid or 3, 3', 5, 5' **tetramethylbenzidine** .

The device can further comprise a cover casing having a liquid sample application aperture and...be used. In a specific embodiment, the enzyme is horseradish idase and the enzymatic substrate **hydrogen peroxide** and the electron peroxi transfer mediator is ferrocene, or a derivative thereof, benzoquinone, ascorbic acid or 3, 3', 5, 5' **tetramethylbenzidine** .

The sample application area must be in fluid communication with the electrosensor. Preferably, the...O.IM sodium acetate (pH 6.0) solution containing 5-10% dimethylsulfoxide, and 0.01% **hydrogen peroxide** as a co-substrate for HRP enzymatic reaction.
Alternatively, ready-to-use liquid substrate solution containing TMB, buffer, and **hydrogen peroxide** can be obtained from commercial sources. Examples of such ready-touse substrate solutions include K...

10/5,K/44 (Item 44 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00469584 **Image available**
MEMBER OF THE TNF FAMILY USEFUL FOR TREATMENT AND DIAGNOSIS OF DISEASE
MEMBRE DE LA FAMILLE DU FACTEUR DE NECROSE TUMORALE (TNF) UTILE POUR LE TRAITEMENT ET LE DIAGNOSTIC DE MALADIES
Patent Applicant/Assignee:
ABBOTT LABORATORIES,
Inventor(s):
WILEY Steven R,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9900518 A1 19990107
Application: WO 98US12101 19980612 (PCT/WO US9812101)
Priority Application: US 97883086 19970626
Designated States: CA JP MX AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Main International Patent Class: C12Q-001/68
International Patent Class: C07K-014/525; C07K-016/22; C12N-015/63; C12N-015/28; C12N-005/10; A61K-031/70; **G01N-033/50** ; **G01N-033/68**
Publication Language: English

English Abstract

An isolated clone consisting of sequences transcribed from the TNF-gamma gene. Also provided are human polypeptides translated from said TNF-gamma sequences and a procedure for producing such polypeptide by recombinant techniques. Also provided are a procedure for producing soluble biologically active TNF-gamma, which may be used to treat deficiencies of TNF-gamma and diseases conditions ameliorated by TNF-gamma. Antibodies, antagonists and inhibitors of such polypeptide which may be used to prevent the action of such polypeptide and therefore may be used therapeutically to treat TNF-gamma associated diseases, tumors or metastases are disclosed. Also disclosed is the use of said antibodies, agonists and inhibitors as well as the nucleic acid sequences to screen for, diagnose, prognosticate, stage and monitor conditions and diseases attributable to TNF-gamma, especially inflammation. The use of said partial sequence to provide antibodies, agonists and inhibitors as well as partial nucleic acid sequences to screen for, diagnose, stage and monitor diseases associated with TNF-gamma, including but not limited to inflammation. Illustrative sequences and clone designations for TNF-gamma are provided.

Detailed Description

... hypertrophic scars, i.e. keloids. Another use is as a birth control agent, by inhibiting **ovulation** and establishment of the placenta. TNF-gamma is also useful in the treatment of diseases...wells to 100 pL of ABTS solution (2,2'-azinobis-[3-ethylbenzothizoline sulfonic acid] diammonium **salt**) (Pierce Chemical Co., Rockford, IL, USA). Alternatively, **color** development can be achieved with the addition to each well of 100 pI of a solution of ophenylene diamine (OPD) in **hydrogen peroxide** , and a 10 n-dn incubation

10/5,K/47 (Item 47 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00444597
MEMBER OF THE TNF FAMILY USEFUL FOR TREATMENT AND DIAGNOSIS OF DISEASE
ELEMENT DE LA FAMILLE TNF UTILISE POUR LE TRAITEMENT ET LE DIAGNOSTIC D'UNE MALADIE
Patent Applicant/Assignee:
ABBOTT LABORATORIES,
Inventor(s):
WILEY Steven R,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9835061 A2 19980813
Application: WO 98US2859 19980212 (PCT/WO US9802859)
Priority Application: US 97798692 19970212; US 9821706 19980210
Designated States: CA JP MX AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: C12Q-001/68
International Patent Class: C12N-15:63; C07K-14:525; C07K-16:28; **G01N-33:50** ; **G01N-33:574** ; A61K-38:19

Publication Language: English

English Abstract

An isolated clone comprising sequences transcribed from the TREPA gene. Also provided are human polypeptides translated from said TREPA sequences and a procedure for producing such polypeptide by recombinant techniques. Also provided are a procedure for producing soluble biologically active TREPA, which may be used to treat deficiencies of TREPA and diseases conditions ameliorated by TREPA. Antibodies, antagonists and inhibitors of such polypeptide which may be used to prevent the action of such polypeptide and therefore may be used therapeutically to treat TREPA-associated diseases, tumors or metastasies are disclosed. Also disclosed is the use of said antibodies, agonists and inhibitors as well as the nucleic acid sequences to screen for, diagnose, prognosticate, stage and monitor conditions and diseases attributable to TREPA, especially inflammation. The use of said partial sequence to provide antibodies, agonists and inhibitors as well as partial nucleic acid sequences to screen for, diagnose, stage and monitor diseases associated with TREPA, including but not limited to inflammation. Illustrative sequences and clone designations for TREPA are provided.

Detailed Description

... hypertrophic scars, i.e. keloids. Another use is as a birth control agent, by inhibiting **ovulation** and establishment of the placenta. TREPA is also useful in the treatment of diseases that...wells to 100 @iL of ABTS solution (2,21-azinobis-[3-ethylbenzothizoline sulfonic acid] diammonium **salt**) (Pierce Chemical Co., Rockford, IL, USA). Alternatively, **color** development can be achieved with the addition to each well of 100 pl of a solution of o-phenylene diamine (OPD) in **hydrogen peroxide** and a 10 min incubation at room temperature. The **color** development reaction is quenched with 100 41 of 1N sulfuric acid. The **colors** in the wells are read as absorbance with a Dynatech MR5000 plate reader at 490...

10/5,K/55 (Item 55 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

00204813

GEL PHASE TRANSITION CONTROLLED BY INTERACTION WITH A STIMULUS

TRANSITION DE PHASE D'UN GEL COMMANDEE PAR L'INTERACTION D'UN STIMULUS

Patent Applicant/Assignee:
MASSACHUSETTS INSTITUTE OF TECHNOLOGY,

Inventor(s):
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KOKUFUTA Etsuo,
ZHANG Yong-Quing,
SUZUKI Atsushi,
MAMADA Akira,
HIROKAWA Yoshitsugu,
TOKITA Masayuki,

Patent and Priority Information (Country, Number, Date):
Patent: WO 9202005 A2 19920206
Application: WO 91US5312 19910726 (PCT/WO US9105312)
Priority Application: US 90733 19900726
Designated States: AT BE CA CH DE DK ES FR GB GR IT JP LU NL SE
Publication Language: English

English Abstract

A phase-transition gel and a method of forming a phase-transition gel which undergoes a significant discontinuous volume change at a desired phase-transition condition in response to a stimulus is disclosed. The phase transition gel includes a liquid medium gelled with a polymer network which has a phase transition condition different from that desired and a phase-transition-modifying agent sufficient to cause, in response to the stimulus, the discontinuous volume change of the gel at the desired phase-transition condition.

Claim

... esterase, urease, amylase, lipase, galactosidase, catalase, protease, etc, Examples of substrates include sugars, lipids, proteins, **hydrogen peroxide** , etc* it is to be understood that an enzyme inhibitor can be used to interact...

...the gel, thereby causing the phase transition. An example of a suitable chromophore is trisodium **salt** of coppered chlorophyllin. Alternatively, the phase-transition-modifying agent within the gel can comprise a...of the present invention can be used for laboratory testing, such as immunoassay systems and **ovulation** testing. Actuators can be constructed using the gels, such as an energy efficient window, wherein...

10/5,K/63 (Item 63 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

00131909

ENZYME IMMUNOASSAY WITH TWO-PART SOLUTION OF TETRAMETHYLBENZIDINE AS CHROMOGEN

Patent Applicant/Assignee:
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Inventor(s):
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Patent and Priority Information (Country, Number, Date):
Patent: WO 8604421 A1 19860731
Application: WO 85US73 19850117 (PCT/WO US8500073)
Priority Application: WO 85US73 19850117
Designated States: DE FR JP
Main International Patent Class: **G01N-033/54**
International Patent Class: **G01N-33:58** ; **G01N-33:74** ; **G01N-33:76**
Publication Language: English

English Abstract

Colorimetric detection of bindable substances such as antibodies and antigens using chromogens of improved sensitivity and stability. The chromogenes take the form of activated solutions containing tetramethylbenzidine or water soluble derivatives of

tetramethylbenzidine. Such chromogens are of particular use in home testing applications for detection of antigens such as human chorionic gonadotropin, human **luteinizing** hormone, and gonococcus bacteria, as well as the detection of antibodies for these substances.

Detailed Description
... oxidoreductases, one might monitor the oxidation of a chromogenic substance by a substrate such as **hydrogen peroxide** . Such so-called **colorometric** assays are readily adapted to the home -testing environment. When the chromogenic substance oxidizes, it forms a chromophore which exhibits visually discer-nable **color** changes.

Typical enzyme immunoassays include competitive EIA for antigens, and an enzyme linked immunosorbent assay...compounds have been reported as soluble and initially colorless, yielding color change upon oxidation with **hydrogen peroxide** . Typical enzymes that have been used in the enzyme immunoassay methods are horseradish peroxidase, glucose...

...be stable, soluble, and exhibit rapid color change upon reaction. Also, with substrate, e.g., **hydrogen peroxide** when exposed to oxidative enzymes, the product chromophore should likewise be safe, stable, and exhibit...has been used to determine peroxidase activity of hemew proteins. In such an application, benzidine- **hydrogen peroxide** chromogenic substrates have been used in forensic medicine for the detection of blood using the peroxidase activity of hemoglobin. Also, **benzidine** staining procedures have been used to detect the peroxidase actiVity of the heme proteins cytochrome...

...One such alternative reported in the literature is the use of 3,3',5,51-- **tetramethylbenzidine** in **hydrogen peroxide** as a stain for the peroxidase activity of heme proteins, particulary cytochrome P The results of the improved staining procedures using **betramethylbenzidine** are reported in P. Thomas, B. Ryan, and W. Levin, An?Llytical Biochemistry 75, 168-176 (1976), The advantages of using **tetramethylbenzidine** for the heme staining of cytochrome P-450 as reported in this reference were that the TMB substrates exhibited increased sensitivity, clear dull background, thereby imuroving **color** contrast, and greater staining stability, i.e., the TMB stained gels could be stored in...

...sample. Quantitative measurement is obtained spectro photometrically by reading the absorbance at maximum absorbance wavelength.

Tetramethylbenzidine and its water soluble chemical derivatives, particularly water soluble inorganic or organic acid **salts** thereof have important advantages over other sensitive chromogens in application to **colorimetric** enzyme immunoassays, An activated chromogen solution of **o - phenylenediamine** (OPD) dissolved in **hydrogen peroxide** shows the characteristic that the OPD chromogen slowly oxidizes to a yellow/orange **color** when left to stand alone without the presence of enzyme. This must be taken into account when actually conducting the assay in the presence of enzyme. By contrast, solutions of **tetramethylbenzidine** in **hydrogen peroxide** or inorganic or organic water soluble **salts** of **tetramethylbenzidine** in **hydrogen peroxide** oxidize to **color** far less rapidly than the OPD **hydrogen peroxide** solution* Therefore, there is significantly less background **color** development in the case of TMB in **hydrogen peroxide** . Furthermore, solutions of tetramethylbenzidirie or its water soluble **salts** have the additional advantage over OPD solutions in that the TMB solutions are very stable when left alone prior to admixture of

Biblio Patents

11/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

007595162
WPI Acc No: 1988-229094/198833
XRAM Acc No: C88-102302
XRPX Acc No: N88-174324

Indirect colorimetric detection of analyte - using a ratio of light signals, one of which is at a wavelength where attenuation occurs at increasing concn.

Patent Assignee: BECTON DICKINSON CO (BECT)
Inventor: KRAUTH G H
Number of Countries: 020 Number of Patents: 013
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 278149	A	19880817	EP 87305385	A	19870617	198833	B
JP 63180858	A	19880725	JP 87210024	A	19870824	198835	
DK 8702726	A	19880713				198839	
AU 8773771	A	19880714				198842	
FI 8702432	A	19880713				198842	
US 4954435	A	19900904	US 872334	A	19870112	199038	
CA 1284947	C	19910618				199129	
EP 278149	B1	19920909	EP 87305385	A	19870617	199237	
DE 3781672	G	19921015	DE 3781672	A	19870617	199243	
			EP 87305385	A	19870617		
FI 88340	B	19930115	FI 872432	A	19870601	199308	
ES 2035062	T3	19930416	EP 87305385	A	19870617	199324	
JP 94007129	B2	19940126	JP 87210024	A	19870824	199407	
DK 169710	B	19950116	DK 872726	A	19870527	199508	

Priority Applications (No Type Date): US 872334 A 19870112
Cited Patents: A3...8844; EP 165072; EP 191575; No-SR.Pub; US 4401387; US 4495293; US 4503143
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 278149	A	E	17		
Designated States (Regional): BE CH DE ES FR GB GR IT LI NL SE					
EP 278149	B1	E	18	G01N-033/543	
Designated States (Regional): BE CH DE ES FR GB GR IT LI NL SE					
DE 3781672	G			G01N-033/543	Based on patent EP 278149
FI 88340	B			G01N-033/543	Previous Publ. patent FI 8702432
ES 2035062	T3			G01N-033/543	Based on patent EP 278149
JP 94007129	B2		17	G01N-033/543	Based on patent JP 63180858
DK 169710	B			G01N-033/543	Previous Publ. patent DK 8702726

Abstract (Basic): EP 278149 A

Method for the detection of an analyte in a sample comprises (a) directing an incident light at different wavelengths into a liq. suspension or soln. contg. an analyte of interest, the suspension or soln. being capable of attenuating the amt. of light signal at a first wavelength as a function of the increasing concn. of the analyte present, (b) detecting light signal at the first wavelength and at a second wavelength at which no attenuation of light signal occurs as the concn. of the analyte increases and (c) forming a ratio of the 2 respective wavelengths and comparing the ratio with ratios of known amts. of the analyte to determine the amt. of analyte in the sample. Pref. the light signals detected are light scatter or fluorescence emissions.

USE/ADVANTAGE - Using a ratio of light signals provides a

correction mechanism for obviating such variable as fluctuation in the lamp output, variations in tube position, dia. or optical quality. Use of the ratio also overcomes differences in the cocncn. of the particulate matter which is added to the admixt. for light detection purposes when light scatter attenuation is used. The method allows for a sensitive detection of the analyte since low concns. of prefd. chromogenic substances affect the deg. of light scatter or fluorescence.

0/6

Title Terms: INDIRECT; COLORIMETRIC; DETECT; ANALYTE; RATIO; LIGHT; SIGNAL; ONE; WAVELENGTH; ATTENUATE; OCCUR; INCREASE; CONCENTRATE
Derwent Class: B04; J04; S03
International Patent Class (Main): G01N-033/543
International Patent Class (Additional): C12Q-001/28; G01J-003/42; G01N-033/52; G01N-033/54; G01N-033/545; G01N-033/573; G01N-033/76
File Segment: CPI; EPI

11/5/5 (Item 5 from file: 350)

003652968
WPI Acc No: 1983-12958K/198306
XRAM Acc No: C83-012533
XRPX Acc No: N83-024143

Determn. of human chorionic gonadotropin - by enzyme-immunoassay, using solid phase on which monoclonal antibody to HCG is immobilised immobilised

Patent Assignee: TOYOBO KK (TOYM)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 57201853	A	19821210				198306	B

Priority Applications (No Type Date): JP 8187652 A 19810608
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 57201853	A		7		

Abstract (Basic): JP 57201853 A

In the quantitative determination of human chorionic gonadotropin (HCG) by enzyme-immunoassay (EIA), solid phase on which monoclonal antibody to HCG is immobilised is used. Method is used for microdetermination of HCG to detect malignant tumour. By the use of immobilised monoclonal anti-HCG, interference by **luteinizing** hormone (LH) is minimised to improve selectivity of the test method.

In an example, in a plastic test tube, 50 microlitres of the sample (or standard HCG soln.) and 200 microlitres of 0.02 M phosphate buffer soln. (pH 7.5) were mixed. A polystyrene bead on which monoclonal anti-HCG is immobilised was added, and the mixt. shaken. The bead was sepd. from the mixt., and washed with physiological saline soln. The bead was then reacted with commercial polyclonal anti-HCG labelled with peroxidase. In another test tube, the polystyrene bead was reacted with 0.5 mL of substrate soln. contg. 0.3% **o - phenylenediamine** and 0.02% **H2O2** . The enzyme reaction was stopped by adding 2 mL of 1N H2SO4, and then absorbence of the mixt. at 492 nm was determined.

Title Terms: DETERMINE; HUMAN; CHORIONIC; GONADOTROPIN; ENZYME; IMMUNOASSAY ; SOLID; PHASE; MONO; CLONE; ANTIBODY; HCG; IMMOBILISE; IMMOBILISE
Derwent Class: A96; B04; D16

International Patent Class (Additional): G01N-033/54
File Segment: CPI

11/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

000547853
WPI Acc No: 1967-03834H/196801
Test article for determining the fertile period of women comprises an - absorbent material impregnated with mannitol-peroxide complex and an o
Patent Assignee: FOSTER RO (WESN)
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 3406015	A					196801	B
JP 70026673	B					197034	

Priority Applications (No Type Date): US 65429619 A 19650201; US 65429619 A 19650201

Abstract (Basic): US 3406015 A
Article for the determination of the fertile period of women consisting essentially of an absorbent material impregnated with (a) a mannitol-peroxide complex, and (b) an essentially non-toxic organic compound, which forms a coloured oxidation product in the presence of oxygen given off by the peroxide.
The absorbent material may be an absorbent paper, such as absorbent, chemically-pure filter paper, strips of fabric, or pieces of porous, absorbent wood. Complex (a) is prepared from mannitol and aqueous **hydrogen peroxide** . Organic compound (b) is pref. guaiac resin, but may also be **benzidine** , **o - tolidine** , dianisidine, phenylenediamine, or 2, 7-diaminofluorene dihydrochloride.
The article is contacted with a saliva specimen from the test-subject. During the period of fertility and **ovulation** a colour change occurs in the article, whereas at other periods no colour change occurs. The test is rapid and easily operated. The test is mainly intended for human use, but may be also used for animals. The complex (a) is stable, whereas **hydrogen peroxide** by itself is unstable.
Title Terms: TEST; ARTICLE; DETERMINE; FERTILITY; PERIOD; WOMAN; COMPRISE; ABSORB; MATERIAL; IMPREGNATE; MANNITOL; PEROXIDE; COMPLEX
Derwent Class: B07; C03
File Segment: CPI

11/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

000521859
WPI Acc No: 1966-22417F/196800
Test article for determining the fertile period of
Patent Assignee: ULESTON LABS INC (WESN)
Number of Countries: 007 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
ZA 6600465	A					196800	B
AU 6601069	A					196801	
CA 822602	A					196801	

FR 1466811	A	196801
NL 6601080	A	196801
JP 70026673	B	197034
DE 1303594	B	197218

Priority Applications (No Type Date): US 65429619 A 19650201

Abstract (Basic): ZA 6600465 A

Article for the determination of the fertile period of women consisting essentially of an absorbent material impregnated with (a) a mannitol-peroxide complex, and (b) an essentially non-toxic organic compound, which forms a coloured oxidation product in the presence of oxygen given off by the peroxide.

The absorbent material may be an absorbent paper, such as absorbent, chemically-pure filter paper, strips of fabric, or pieces of porous, absorbent wood. Complex (a) is prepared from mannitol and aqueous **hydrogen peroxide** . Organic compound (b) is pref. guaiac resin, but may also be **benzidine** , **o - tolidine** , dianisidine, phenylenediamine, or 2,7-diaminofluorene dihydrochloride.

The article is contacted with a saliva specimen from the test-subject. During the period of fertility and **ovulation** a colour change occurs in the article, whereas at other periods no colour change occurs. The test is rapid and easily operated. The test is mainly intended for human use, but may be also used for animals. The complex (a) is stable, whereas **hydrogen peroxide** by itself is unstable.

Title Terms: TEST; ARTICLE; DETERMINE; FERTILITY; PERIOD
Derwent Class: B00
File Segment: CPI

11/TI/1 (Item 1 from file: 350)

Absorbent article used in sanitary napkins and panty liners has odor control system comprising an oxidizing agent and an absorbent core disposed between liquid permeable top sheet and air permeable back sheet

11/TI/2 (Item 2 from file: 350)

Absorbent articles e.g. sanitary napkin, pantiliner, tampon, diaper or incontinence pad for controlling odors from body fluids comprise an odor control system containing oxidizing agents and odor absorbing agents

11/TI/3 (Item 3 from file: 350)

Use of new and known androst-5-en-17beta-yl)alkylsulfoxide or sulfone compounds for controlling fertility

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Set     Items   Description
S1       2941   OVULAT? OR MENSTRUAT? OR LUTEINIZ? OR LUTEINIS?
S2      36132   HYDROGEN()PEROXIDE OR H2O2
S3     323514   COLOR???
S4     506465   BENZIDINE OR TETRAMETHYLBENZIDINE OR DIAMINOBENZIDINE OR S-
             ALT? ? OR 3()AMINO()9()ETHYLCARBAZOLE OR 4()METHOXY(2W)NAPHTH-
             OL OR O()(TOLIDINE OR DIANISIDINE OR METHOXYPHENOL OR PHENYLE-
             NEDIAMINE) OR 5()AMINOSALICYLIC OR PYROGALLOL
S5           7   S1 AND S2 AND (S3 OR S4)
S6           7   IDPAT (sorted in duplicate/non-duplicate order)
S7           7   IDPAT (primary/non-duplicate records only)
S8     592421   S3 OR COLOUR???
S9           7   S1 AND S2 AND (S3 OR S4)
S10          7   IDPAT (sorted in duplicate/non-duplicate order)
S11          7   IDPAT (primary/non-duplicate records only)
? show files
File 347:JAPIO Oct 1976-2002/Nov(Updated 030306)
         (c) 2003 JPO & JAPIO
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200317
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
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hydrogen peroxide , whereas OPD has the tendency to oxidize slowly even when in water solution...

10/5,K/64 (Item 64 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00103983
SPECIFIC IMPENDING OVULATION **INDICATOR**
INDICATEUR SPECIFIQUE D' OVULATION **IMMINENTE**
Patent Applicant/Assignee:
OSTER G,
KESTON A,
Inventor(s):
OSTER G,
KESTON A,
Patent and Priority Information (Country, Number, Date):
Patent: WO 8002800 A1 19801224
Application: WO 80US813 19800620 (PCT/WO US8000813)
Priority Application: US 7950810 19790621
Designated States: JP AT CH DE FR GB LU NL SE
Main International Patent Class: A61K-039/00
International Patent Class: C12Q-01:28; C12Q-01:66; **G01N-33:48**
Publication Language: English

English Abstract
Method for detecting impending **ovulation** in the human female by testing means employable by the average person. The test method involves contating vaginal fluid samples with a bibulous mat containing an antibody against estrogen-induced peroxidase. The mat is then washed and tested for peroxidase.

Detailed Description
This invention relates to methods of detecting im pending **ovulation** in human females, including methods which are sufficiently simple so that a woman can carry...

...of peroxidase with a hydroperoxide and-a chromogenic substrate of peroxidase.

The hydroperoxide may be **hydrogen peroxide** or a hydroperoxide generating system, such as the inorganic peroxides, sodium peroxide, barium peroxide, strontium...

...green (to produce malachite green) and leucophenol phthalein (desirably employed in an alkaline medium);
6) **Colored** dyes, such as 2,6 dichlorophenol indo phenol;
7) Various biological substances, such as epinephine, the flavones, tyrosine, dihydrophenyl alanine (producing an orange-reddish **color**) and tryptophane, Other substances such as gum guaiac, guaiaconic acid, Nadi reagent (produc ing a bluish **color**), bilirubin (producing a greenish **color**), iodides (which produce a brown **color** and, if starch is present, produce a deep blue **color** which is much stronger than iodide alone) .

Some of the substances may be most effectively...

Claim
... pressed against starch iodide test paper and the test paper is moistened with 0.01% **hydrogen peroxide** . A strong blue **color** is re garded as a positive test and weak or no **coloration** is regarded as a negative test, For best results it is preferable to start on...

...6 for the daily routine. The first positive test ma be taken to indicate that **ovulation** is impending and y will follow within two or three days. In place of starch-iodide test paper, filter paper impregnated with 3.3',5,5' **tetramethylbenzidine** and potassium thiocyanate, impregnated with p,pl biphenol and sodium thiocyanate, or guaiac, or orthotolidine...

10/5,K/65 (Item 65 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00103779
IMPENDING OVULATION **TEST**
PROCEDE DE DETERMINATION D'UNE OVULATION **IMMINENTE**
Patent Applicant/Assignee:
OSTER G,
KESTON A,
Inventor(s):
OSTER G,
KESTON A,
Patent and Priority Information (Country, Number, Date):
Patent: WO 8002596 A1 19801127
Application: WO 80US618 19800516 (PCT/WO US8000618)
Priority Application: US 7939273 19790516
Designated States: JP AT CH DE FR GB LU NL SE
Publication Language: English

English Abstract
Method for detecting impending **ovulation** in the human female by testing means employable by the average person. The test method involves contacting vaginal fluid samples with chemicals that indicate the presence of peroxidase in the vaginal fluid samples, e.g. a chromogenic substrate of peroxidase mixed with a hydroperoxide.

Detailed Description
This invention relates to methods of detecting impending ovluation in human...

...forms of the test involves the use of a paper comprising starch and an iodide **salt** which produces a blue **color** in the presence of a peroxidase when moistened with **hydrogen peroxide** . When peroxidase is present in the vaginal fluid the aforesaid test sheet will tdrn blue...

...gave a strong color (i.e. a positive test).

Here again the test presumably anticipated **ovulation** .

In place of ortho-tolidine a number of chromogenic substrates may be used, such as...

10/TI/1 (Item 1 from file: 348)

Polypeptide and process for measuring living body components using the same
Polypeptide und Verfahren zur Messung von Komponenten eines Lebenskorpers durch deren Gebrauch
Polypeptides et procede de mesure de composants dans un organisme vivant les moyennant

10/TI/2 (Item 2 from file: 348)

Particles having an incorporated composition comprising a chemiluminescent compound
Teilchen enthaltende eine Zusammensetzung die eine chemilumineszierende Verbindung enthalt
Particules contenant une composition comprenant un compose chimioluminescent

10/TI/3 (Item 3 from file: 348)

A homogeneous assay for determining analyte
Homogenes Testsystem zur Bestimmung eines Analytes
Essai homogene pour determiner un analyte

10/TI/4 (Item 4 from file: 348)

Vascular smooth muscle cell growth factor
Wachstumsfaktor fur Zellen der glatten Gefassmuskulatur
Facteur de croissance pour des cellules des muscles vasculaires lisses

10/TI/5 (Item 5 from file: 348)

USE OF VANADIUM BROMOPEROXIDASE AS A SIGNAL-GENERATING ENZYME FOR CHEMILUMINESCENT SYSTEMS: TEST KITS AND ANALYTICAL METHODS
VERWENDUNG EINER VANADIN-BROMPEROXIDASE ALS EIN SIGNALGENERIERENDES ENZYM FUR CHEMILUMINESZIERENDE SYSTEME: TESTKITS UND ANALYTISCHE VERFAHREN
KITS D'ESSAI ET PROCEDES D'ANALYSE DANS LESQUELS LA BROMOPEROXYDASE DE VANADIUM EST UTILISEE COMME ENZYME GENERATRICE DE SIGNAUX POUR DES SYSTEMES A CHIMIOLUMINESCENCE

10/TI/6 (Item 6 from file: 348)

Polypeptide and process for measuring living body components using the same
Polypeptide und Verfahren zur Messung von Komponenten eines Lebenskorpers durch deren Gebrauch
Polypeptides et procede de mesure de composants dans un organisme vivant les moyennant

10/TI/7 (Item 7 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Method and device for specific binding assay
Methode und Vorrichtung fur eine Bestimmung durch spezifische Bindung
Methode et dispositif a utiliser dans les essais de liaisons specifiques

10/TI/8 (Item 8 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Electrochemical assay method and novel p-phenylenediamine compound
Elektrochemische Bestimmungsmethode und neue p-Phenylendiamin-Verbindung
Methode d'essai electrochimique et compose de p-phenylenediamine nouveau

10/TI/9 (Item 9 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Assay methods utilizing induced luminescence
Bestimmungsmethoden unter Verwendung von induzierter Lumineszenz
Methodes d'essai employant luminescence induite

10/TI/10 (Item 10 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Process and device for specific binding assay
Verfahren und Vorrichtung zur Verwendung in spezifischen Bindungstests
Procede et dispositif a utiliser dans les essais de liaisons specifiques

10/TI/11 (Item 11 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Process and device for specific binding assay.
Verfahren und Vorrichtung fur spezifische Bindungsassay.
Procede et dispositif d'essai de liaisons specifiques.

10/TI/13 (Item 13 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

HUMAN INTRA-ACROSOMAL SPERM ANTIGEN FOR USE IN A CONTRACEPTIVE VACCINE
MENSCHLICHES INTRA-AKROSOMALES SPERMAANTIGEN ZUR VERWENDUNG IN EINEM EMPFANGNISVERHUTUNGSIMPFSTOFF
ANTIGENE INTRA-ACROSOMAL DU SPERME HUMAIN ET SON UTILISATION DANS UN VACCIN CONTRACEPTIF

10/TI/14 (Item 14 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Reaction vessel.
Reaktionsgefass.
Recipient pour reactions.

10/TI/15 (Item 15 from file: 348)

Anti-hCG-beta core monoclonal antibody, its production and use.
Monoklonaler Antikorper gegen Kern-hCG-beta, seine Herstellung und Verwendung.
Anticorps monoclonal contre le hCG-beta a noyau, sa production et son utilisation.

10/TI/16 (Item 16 from file: 348)

Agent for determining manganese and method relating thereto.
Agenz zur Bestimmung von Mangan und Verfahren in Verbindung damit.
Agent pour determiner du manganese et methode afferent a cela.

10/TI/18 (Item 18 from file: 348)

Analytic reader device.
Gerat zum Ablesen analytischer Tests.
Dispositif de lecture analytique.

10/TI/19 (Item 19 from file: 348)

Improved dipstick device for assays.
Teststab.
Batonnet pour essais.

10/TI/20 (Item 20 from file: 348)

Antibody to polypeptides complementary to peptides or proteins having an amino acid sequence or nucleotide coding sequence at least partially known and methods
Antikorper gegen Polypeptide, die gegen Peptide oder Proteine mit mindestens teilweise bekannter Aminosaure oder kodierender Nukleotidsequenz komplementar sind
Anticorps contre des polypeptides complementaires de peptides ou proteines ayant une sequence d'acides amines ou une sequence de nucleotides codants au moins pa

10/TI/22 (Item 22 from file: 348)

A new universally applicable detection system based On ultra small colloidal metal particles.
Auf ultrakleine kolloidale Metallteilchen gegrundetes, allgemein anwendbares Nachweissystem.
Systeme de detection universellement applicable base sur des particules colloidales de metal ultra-petites.

10/TI/24 (Item 24 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Assays.
Assays.
Essais.

10/TI/25 (Item 25 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Indirect colorimetric detection of an analyte in a sample using ratio of light signals.
Indirekte kolorimetrische Detektion eines Analyten in einer Probe unter Zuhilfenahme des Verhaltnisses von Lichtsignalen.
Detection colorimetrique indirecte d'un analyte dans un echantillon en ayant recours au rapport entre des signaux de lumiere.

10/TI/26 (Item 26 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Solid phase immunoassay method.
Festphasen-Immuntestverfahren.
Procede de dosage immunologique en phase solide.

10/TI/27 (Item 27 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Detection of haptèns in immunoassay techniques.
Nachweis von Haptenen in Immunotestverfahren.
Detection d'haptenes dans des techniques d'immunoessai.

10/TI/28 (Item 28 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

METHOD OF IMMUNOASSAY.
IMMUNTESTVERFAHREN.
PROCEDE D'IMMUNOANALYSE.

10/TI/30 (Item 30 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Multizone analytical element for immunoassays having detectable signal concentrating zone.
Mehrschichtiges analytisches Element fur Immunoassays mit einer Schicht zum Konzentrieren des Nachweisbarsignals.
Element analytique multicouche pour des essais immunologiques ayant une couche pour concentrer le signal detectable.

10/TI/31 (Item 31 from file: 349)
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INDIVIDUALIZATION OF THERAPY WITH ANTINEOPLASTIC AGENTS
PERSONNALISATION D'UNE THERAPIE A L'AIDE D'AGENTS ANTINEOPLASIQUES

10/TI/32 (Item 32 from file: 349)
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FLOW THROUGH ASSAY DEVICE, DIAGNOSTIC KIT COMPRISING SAID ASSAY DEVICE AND USE OF SAID ASSAY DEVICE IN THE DETECTION OF AN ANALYTE PRESENT IN A SAMPLE
DISPOSITIF D'ESSAI EN CONTINU, TROUSSE DE DIAGNOSTIC COMPRENANT LEDIT DISPOSITIF ET UTILISATION DE CE DISPOSITIF POUR LA DETECTION D'UN ANALYTE DANS UN ECHANTILLON

10/TI/34 (Item 34 from file: 349)
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METHODS AND COMPOSITIONS FOR IN VITRO TARGETING
PROCEDES ET COMPOSITIONS UTILISES POUR LE CIBLAGE IN VITRO

10/TI/35 (Item 35 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

LEUCINE-RICH REPEAT-CONTAINING G-PROTEIN COUPLED RECEPTOR-8 MOLECULES AND USES THEREOF
MOLECULES DU RECEPTEUR 8 COUPLE A LA PROTENIE G CONTENANT DES REPETITIONS RICHES EN LEUCINES, ET UTILISATIONS ASSOCIEES

10/TI/37 (Item 37 from file: 349)
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PRODUCTION AND USE OF PROTEIN VARIANTS HAVING MODIFIED IMMUNOGENECITY
VARIANTS DE PROTEINES A IMMUNOGENICITE MODIFIEE

10/TI/38 (Item 38 from file: 349)
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COMPOSITIONS FOR DETECTION OF MULTIPLE ANALYTES
COMPOSITIONS SERVANT A LA DETECTION D'ANALYTES MULTIPLES

10/TI/39 (Item 39 from file: 349)
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DIAGNOSTIC ASSAY FOR ENDOMETRIOSIS
DOSAGE DIAGNOSTIQUE DE L'ENDOMETRIOSE

10/TI/40 (Item 40 from file: 349)
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DIAGNOSTIC ASSAY FOR ENDOMETRIOSIS
ESSAI DIAGNOSTIQUE POUR ENDOMETRIOSE

10/TI/41 (Item 41 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

BETA-LIKE GLYCOPROTEIN HORMONE POLYPEPTIDE AND HETERODIMER
HETERODIMERE ET POLYPEPTIDE D'HORMONE DE GLYCOPROTEINE DE TYPE BETA

10/TI/42 (Item 42 from file: 349)

PLASMINOGEN ACTIVATOR ASSAY INVOLVING AN ELASTASE INHIBITOR
PARTICULES UTILISEES A DES FINS DIAGNOSTIQUES ET THERAPEUTIQUES

10/TI/45 (Item 45 from file: 349)

PRENATAL DIAGNOSTIC METHODS
PROCEDES DE DIAGNOSTIC PRENATAL

10/TI/46 (Item 46 from file: 349)

TREATMENT AND DIAGNOSIS OF INFERTILITY USING TGF'beta' OR ACTIVIN
TRAITEMENT ET DIAGNOSTIC D'UNE STERILITE PAR LE TGF-'beta' OU L'ACTIVINE

10/TI/48 (Item 48 from file: 349)

POSITIVELY CHARGED NON-NATURAL AMINO ACIDS, METHODS OF MAKING THEREOF, AND USE THEREOF IN PEPTIDES
ACIDES AMINES NON NATURELS ET CHARGES POSITIVEMENT, PROCEDES DE SYNTHESE CORRESPONDANTS ET UTILISATION DE CES ACIDES AMINES DANS DES PEPTIDES

10/TI/49 (Item 49 from file: 349)

HUMAN TYPE II GONADOTROPIN-RELEASING HORMONE RECEPTOR
RECEPTEUR HUMAIN DE L'HORMONE DE LIBERATION DE LA GONADOTROPHINE DE TYPE II

10/TI/50 (Item 50 from file: 349)

CHEMILUMINESCENT COMPOSITIONS AND THEIR USE IN THE DETECTION OF HYDROGEN PEROXIDE
COMPOSITIONS CHIMIOLUMINESCENTES ET LEUR UTILISATION DANS LA DETECTION DE PEROXYDE D'HYDROGENE

10/TI/51 (Item 51 from file: 349)

DETERMINATION AND MONITORING OF BLADDER CANCER
DETERMINATION ET CONROLE DE L'EVOLUTION DU CANCER DE LA VESSIE

10/TI/52 (Item 52 from file: 349)

COLOR HEAT MOUNT DETECTORS
DETECTEURS CHROMATIQUES DE MONTE EN PERIODE DE CHALEURS

10/TI/53 (Item 53 from file: 349)

TRANSPARENT ASSAY TEST DEVICES AND METHODS
DISPOSITIFS TRANSPARENTS POUR ANALYSES, ET PROCEDES ASSOCIES

10/TI/54 (Item 54 from file: 349)

NOVEL CHEMILUMINESCENT COMPOUNDS AND METHODS OF USE
NOUVEAUX COMPOSES CHIMIOLUMINESCENTS ET PROCEDES D'UTILISATION

10/TI/56 (Item 56 from file: 349)

AN ASSAY METHOD USING INTERNAL CALIBRATION TO MEASURE THE AMOUNT OF ANALYTE IN A SAMPLE
PROCEDE D'ANALYSE UTILISANT L'ETALONNAGE INTERNE POUR MESURER LA QUANTITE D'ANALYTE DANS UN ECHANTILLON

10/TI/57 (Item 57 from file: 349)

ANTIBODY TO PITUITARY ADENYLATE CYCLASE ACTIVATING PEPTIDE-PACAP, HYBRIDOMA AND ASSAY FOR PACAP
ANTICORPS DE PEPTIDE ACTIVATEUR DE CYCLASE D'ADENYLATE PITUITAIRE (PACAP), HYBRIDOME ET ANALYSE DE PACAP

10/TI/58 (Item 58 from file: 349)

POLYPEPTIDE ANALOGS OF APOLIPOPROTEIN E, DIAGNOSTIC SYSTEMS AND METHODS USING THE ANALOGS
ANALOGUES POLYPEPTIDES D'APOLIPOPROTEINE E, SYSTEMES DIAGNOSTIQUES ET PROCEDES UTILISANT LES ANALOGUES

10/TI/59 (Item 59 from file: 349)

NOVEL CHEMILUMINESCENT FUSED POLYCYCLIC RING-CONTAINING 1,2-DIOXETANES AND ASSAYS IN WHICH THEY ARE USED
NOUVEAUX 1,2-DIOXETANES CHIMIOLUMINESCENTS CONTENANT UN ANNEAU POLYCYCLIQUE FUSIONNE, ET ANALYSES LES UTILISANT

10/TI/60 (Item 60 from file: 349)

ASSAYS
ANALYSES

10/TI/61 (Item 61 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

SOLID PHASE IMMUNOASSAY METHOD
PROCEDE IMMUNOANALYTIQUE EN PHASE SOLIDE

10/TI/62 (Item 62 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

POLYPEPTIDES COMPLEMENTARY TO PEPTIDES OR PROTEINS HAVING AN AMINO ACID SEQUENCE OR NUCLEOTIDE CODING SEQUENCE AT LEAST PARTIALLY KNOWN AND METHODS OF DESIGN THEREFOR

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(54) Title: IMPENDING OVULATION TEST

(57) Abstract

Method for detecting impending ovulation in the human female by testing means employable by the average person. The test method involves contacting vaginal fluid samples with chemicals that indicate the presence of peroxidase in the vaginal fluid samples, e.g. a chromogenic substrate of peroxidase mixed with a hydroperoxide.

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Description

Impending Ovulation Test

Technical Field

This invention relates to methods of detecting impending ovluation in human females, including methods which are sufficiently simple so that a woman can carry out the test on herself without the aid of a physician.

Background Art

While prior methods of fertility or ovulation testing have been proposed, prior tests have one or more undesirable aspects. For example, in the prior art the method of utilizing thermometry (the basal body temperature method) provides information on fertility, but this test merely indicates that ovulation has already occurred and does not detect impending ovulation.

The prior ovulation detection methods involving an examination of cervical mucus for its flow properties, saline content, glucose content and the like, are also deficient in that they do not easily lend themselves to self-examination by the woman and require sampling of portions of the vagina. Similarly, microscopic examination of vaginal cells for staining characteristics and morphology require expensive apparatus and involve techniques which are usually beyond the skill of the average woman. Estrogen analysis of blood and urine is likewise complicated and difficult to carry out.

Means for peroxidase testing have been known since 1898. Such means have been used for over 75 years for the detection of blood, including commercial articles sold, for example, by Smith Kline and French Laboratories and by Miles Laboratories, for the detection of occult blood in urine and feces. Despite the long history

of the peroxidase test it has not been previously used to determine the surge in estrogen-induced peroxidase in vaginal fluid for the detection of impending ovulation. This may be due to the fact that pathological conditions or injuries resulting in blood being present in the vagina contribute to a false positive indication for estrogen-induced peroxidase. It is known that hemoglobin and its degradation products exhibit a peroxidase-like reaction and, indeed, this property is utilized in the occult blood test for urine and feces.

Disclosure of Invention

In the approximately two to three days prior to ovulation in the menstrual cycle of normal human females there is a surge in the amount of estrogen-induced peroxidase in the vaginal fluid. A simple form of the invention contemplates the woman taking a sample of vaginal fluid with, for example, a moistened cotton swab and contacting the swab with a bibulous material comprising a substance which will cause a visible change in the presence of peroxidase and a peroxide. Such visible change could be a change in color or in luminescence. The finding that the peroxidase is present in the vaginal fluid makes it possible for a woman to readily obtain a sample with a moistened cotton swab with no harm to herself.

One of the preferred forms of the test involves the use of a paper comprising starch and an iodide salt which produces a blue color in the presence of a peroxidase when moistened with hydrogen peroxide. When peroxidase is present in the vaginal fluid the aforesaid test sheet will turn blue.

Some of the means used in this invention detect both peroxidase and peroxidase-like substances, such as hemoglobin and its degradation products.

Best Mode For Carrying Out the Invention

A simple method for the detection of impending ovulation in women, as in the present invention, is of the highest importance to the human race and is of paramount interest to such prestigious organizations as the Population Council, the Ford Foundation, the National Institutes of Health and the World Health Organization. With the present invention a woman can, by herself, determine her impending fertile time. There is extensive clinical evidence that for women the fertile time commences within 12 to 72 hours of ovulation (C. Tietze Fertility and Sterility, Vol. 11, p. 485, 1960). By abstaining from coitus or by otherwise protecting herself from insemination during the fertile time a woman can avoid pregnancy. Thus with the aid of the present invention which enables a woman to determine her fertile time, this form of birth control could, if practiced widely, substantially reduce the rate of world-population growth. Using the present invention one may practice birth control without interference with the normal female hormonal function, such as occurs with the contraceptive pill which is objectionable to certain segments of the world population on religious grounds, as well as to others on medical grounds due to the possible serious side effects. A woman practicing abstinence during the fertile period as determined by the present invention may avoid the need for contraceptive devices, such as the intrauterine device, for birth control which are considered undesirable to some.

The present invention may also be an aid to couples who wish to have a child, but have failed because, for example, incorrect timing of coitus. Thus it may be seen that because the present invention can be a valuable aid in family planning, it serves an important humanitarian purpose.

A preferred embodiment of the present invention uses a chromogenic substrate which responds rapidly to the estrogen-induced peroxidase of the vagina in the presence of a peroxide, but responds much more slowly to the action of hemoglobin or its degradation products. Such chromogenic substrates are characterized by the fact that the rate constant (commonly designated k_4; see B. Chance, Advances in Enzymology, 1951, Volume 12, pages 153-180) for the reaction of the substrate with the peroxidase-peroxidide complex exceeds about 10^5 moles^{-1} seconds^{-1}. Substrates having such high values of k_4 include, for example, p,p^1 biphenol, hydroquinone and 0-phenylenediamine. It should be noted that values of k_4 for a given chromogenic substance may differ somewhat with the choice of the particular hydroperoxide employed.

One of the preferred embodiments involves impregnating a bibulous strip of paper with an inorganic peroxide such as hydrogen peroxide, sodium peroxide, barium peroxide, strontium peroxide, sodium perborate, and the like or an organic peroxide, such as methyl hydroperoxide, ethyl hydroperoxide, cumene hydroperoxide, dimethoxy dihydroperoxy hexane, and the like. Hydrogen peroxide may be considered both an inorganic peroxide and as a hydroperoxide. Many compounds, for example sodium peroxide, barium peroxide, strontium peroxide, sodium perborate, and the bis (1-hydroxyalkyl) peroxides generate hydrogen peroxide when moistened. Enzymatic reactions such as the action in air of L-amino oxidase on L-amino acids also generate hydrogen peroxide.

Chromogenic peroxidase substrates which may be employed in the present invention include the following substances:

1) Monoamines, such an aniline and its derivatives, orthotoluidine, para-toluidine, etc.;

2) Diamines, such as ortho-phenylenediamine, N,N dimethylpara-phenylenediamine, N,N diethyl-phenylenediamine, benzidine, 3,3', 5,5', tetra-methyl benzidine, dianisidine, o-tolidine, etc.;

3) Phenols, such as phenol per se, thymol, ortho, meta and para-cresols, alpha-napthol, p,p-dihydroxybiphenyl, phloroglucinol and guaiacol;

4) Aromatic acids, such as salicylic, pyrocatechuic and gallic acids;

5) Leucodyes, such as leucomalachite green (to produce malachite green) and leucophenolphthalein (desirably employed in a alkaline medium);

6) Colored dyes, such as 2,6 dichlorophenol indo-phenol;

7) Various biological substances, such as epinephine, the flavones, tyrosine, dihydrophenylalanine (producing an orange-reddish color) and trypto-phane. Other substances such as gum guaiac, guaiaconic acid, Nadi reagent (producing a bluish color), bilirubin (producing a greenish color), iodides (which produce a brown color and, if starch is present, produce a deep blue color which is much stronger than iodide alone).

Some of the substances may be most effectively used in combination rather than individually. For example, Nadi reagent is such a mixture, namely naphthol and p-phenylenediamine, which gives a better final color than the individual components. Another example is a mixture of 4-amino antipyrine and 1,7 dihydroxynaphthaline.

Many of the chromogens, notably benzidine and its derivatives give a more intense color if halogen ions, such as iodide and bromide ions, or if halogenoid ions, such as thiocyanate and selenocynate ions, are present.

One of the preferred embodiments of the invention comprises 3,3', 5,5' tetramethyl benzidine and potassium

thiocyanate; this mixture yields an intense blue color in a positive test.

Substrates which change their fluorescence in the presence of a peroxidase and hydrogen peroxide include a loss of fluorescence of scopoletin or a production of fluorescence with, for example, dichlorofluorescin or homovanillic acid. Chemiluminescence is produced in the presence of peroxidases and hydrogen peroxide for the following typical substances, luminol, zinc tetra phenylporphyrine and the like.

The color forming substance may undergo color change, not as a result of the direct action of a hydroperoxide, but by mediation through another compound which is acted upon by a hydroperoxide and does not itself become highly colored. Examples of such color-forming or color-changing substances are:

1) Starch and potassium iodide to produce the characteristic starch-iodine purple which is stronger in color than iodide alone produces.
2) Mixture of a ferrous salt, such as ferrous ammonium sulfate, and tannic acid to produce a dark color.
3) Mixture of potassium iodide and 3,3', 5,5' tetramethyl benzidine to produce a blue-black color stronger than either one alone.
4) Mixture of potassium thiocyanate and o-tolidine forming a blue color stronger than o-tolidine alone.
5) Mixture of potassium thiocyanate and p, p' biphenol forming a black color stronger than p,p' biphenol alone.

Hereinafter such mixtures will also be referred to as chromogenic substrates of peroxidase, even if the mixture does not undergo a color change as a result of the direct action of a hydroperoxide.

Example 1

A woman who has regular menstrual cycles donated vaginal samples daily starting on day 5 of her cycle, where day 1 is taken as the day when menstruation began. The vaginal samples were obtained by the woman using a standard six inch cotton-tipped swab ("Puritan", Hardwood Products Co.). The cotton end was moistened with water and rolled gently on the wall of the anterior vagina. The vaginal sample on the swab was divided into six parts, each part of which was kept moistened.

One portion of the daily sample was contacted with commercially-available starch-iodide test paper (Precision Laboratories) and on the paper was placed a drop of dilute aqueous hydrogen peroxide solution having a concentration of 0.005%. A postive test was indicated by the formation of a strong blue color in about 2 minutes. A negative test was indicated if no color or only weak color was produced in about 2 minutes.

For the woman tested the test was negative for the samples of days 5 through 8, but on days 9 and 10 a strong blue color (i.e. positive color) was obtained. On this same woman tests of lutenizing hormone (LH) were taken on daily samples of her urine and it was found that a surge in LH occurred on day 12. She reported that her cerival mucus felt slippery (the Billing Test) at days 11 and 12 and that her basal body temperature (BBT) rose on day 14. The woman started to menstruate on day 27. The test for peroxidase herein described occurred at a time consistant with the other tests and therefore the positive peroxidase result anticipated ovulation; ovulation presumably occurring on or about day 13.

Example 2

A portion of daily vaginal sample as described in example 1 was dipped into a 0.01% aqueous solution of orthotolidine (made up by diluting a 1% ethanolic solution of ortho-tolidine with 0.01 molar phosphate buffer at pH 6.5) and then dipped into a 0.005% solution of hydrogen peroxide. Vaginal samples of days 5 through 8 gave no color (i.e. a negative test) but samples of days 9 and 10 gave a strong color (i.e. a positive test). Here again the test presumably anticipated ovulation.

In place of ortho-tolidine a number of chromogenic substrates may be used, such as guaiac, p,p' biphenol or 3,3' 5,5' tetramethylbenzidine. Said o-tolidine, p,p' biphenol or tetramethylbenzidine solutions may also comprise a bromide, iodide or thiocyanate. Instead of solutions of the above chromogenic substrates, a bibulous mat, for example paper, comprising them may be employed. After contact with the swab comprising the vaginal sample the bibulous mat is moistened with hydrogen peroxide to produce the color indication if peroxidase is present.

One may also use dichlorfluorescein in place of ortho-tolidine but now a positive test is a strong yellow fluorescence (as observed under Wood's Lamp illumination) while no or only weak fluorescence is a negative test.

Example 3

A portion of the daily vaginal sample as described in example 1 was subjected to the commercially-available "Hematest" test for occult blood (Ames Company). The vaginal sample is applied to the bibulous white paper provided, to which a moistened pill containing, according to the manufacturer, ortho-tolidine, strontium peroxide, calcium acetate and tartaric acid is contacted. Vaginal samples of days 5 through 8 gave no color or only weak

color, but samples of days 9 and 10 gave a strong blue color. Here again the test presumably anticipated ovulation.

Example 4

A portion of the daily vaginal sample as described in example 1 was subjected to the occult blood test portion of the commercially-available "N-Multistix" (Ames Company). According to the manufacturer this portion of the test stick contains ortho-tolidine and cumene hydroperoxide. The test stick gave no or only weak coloration for vaginal samples of days 5 through 8, but gave a strong blue coloration for samples of days 9 and 10. Here again the test presumably anticipated ovulation.

Example 5

A portion of the daily vaginal samples as described in example 1 was subjected to the commercially-available "Hemoccult" occult blood test for feces (Smith Kline and French Laboratories). According to the manufacturer this consists of a bibulous paper impregnated with an ethanolic solution of guaiac and allowed to dry. The vaginal samples were contacted with this test paper and then a 0.1% ethanolic solution of hydrogen peroxide was added. The test paper gave no or only weak coloration for vaginal samples of days 5 through 8, but gave a strong blue coloration for samples of days 9 and 10. Here again the test presumably anticipated ovulation.

Claims

1. A method for detecting impending ovulation in human females comprising a test for peroxidase in a vaginal fluid sample.

2. A method according to claim 1 in which said test for peroxidase produces a color change.

3. A method according to claim 1 in which said test for peroxidase produces a change in luminescence.

4. A method according to claim 1 where the test for peroxidase comprises treating a vaginal fluid sample with a chromogenic substrate of peroxidase and a hydroperoxide.

5. A method according to claim 4 where the test for peroxidase comprises contacting vaginal fluid with an inorganic peroxide.

6. A method according to claim 1 where the test for peroxidase comprises contacting the vaginal fluid sample with a bibulous mat comprising a chromogenic substrate of peroxidase.

7. A claim according to claim 1 where the test for peroxidase comprises contacting the vaginal fluid sample with a bibulous mat, said mat comprising a chromogenic substrate for peroxidase and a hydroperoxide.

8. A claim according to claim 5 where the test for peroxidase comprises contacting a vaginal fluid sample with a chromogenic substrate for peroxidase and an inorganic peroxide in a pill.

9. A claim according to claim 6 where the chromogenic substrate of peroxidase is guaiac.

10. A claim according to claim 7 where the chromogenic substrate for peroxidase is 0-tolidine and the hydroperoxide is cumene hydroperoxide

11. A claim according to claim 8 where the chromogenic substrate for peroxidase is 0-tolidine and the inorganic peroxide is strontium peroxide.

12. A claim according to claim 4 where the vaginal fluid sample is absorbed on a bibulous material which has been in contact with the vagina.

13. A claim according to claim 4 where the chromogenic substrate is starch and a soluble iodide salt.

14. A claim according to claim 4 where the chromogenic substrate is guaiac.

15. A claim according to claim 4 where the chromogenic substrate has a rate constant k_4 (as defined herein) in excess of about 100,000.

16. A claim according to claim 4 where the chromogenic substrate is p,p' biphenol

17. A claim according to claim 4 where the chromogenic substrate is ortho-tolidine and a soluble iodide salt.

18. A claim according to claim 4 where the chromogenic substrate is 3,3',5,5' tetramethylbenzidine and a soluble iodide salt.

19. A claim according to claim 4 where the chromogenic substrate is 3,3' ,5,5' tetramethylbenzidine and a soluble bromide salt.

20. A claim according to clain 4 where the chromogenic substrate is 3,3' ,5,5' tetramethylbenzidine and a soluble thiocyanate salt.

21. A claim according to claim 4 where the chromogenic substrate is orthodianisidine and a soluble iodide salt.

22. A claim according to claim 4 where the chromogenic substrate changes its luminescence after oxidation by peroxide in the presence of peroxidase.

23. A claim according to claim 4 where the hydroperoxide is hydrogen peroxide.

24. A claim according to claim 4 where the hydroperoxide is cumene hydroperoxide.

25. A claim according to claim 4 where the chromogenic substrate is a mixture of p,p' biphenol and a soluble thiocyanate salt.

26. A method according to claim 12 where the bibulous mat which has been in contact with the vagina comprises a chromogenic substrate for peroxidase.

27. A claim according to claim 26 where the chromogenic substrate for peroxidase is guaiac.

28. A claim according to claim 26 where the chromogenic substrate for peroxidase is bilirubin.

29. A claim according to claim 7 where the chromogenic substrate is o-tolidine and the hydroperoxide is dimethoxy dihydroperoxy hexane.

30. A claim according to claim 1 where the test for peroxidase comprises contacting a vaginal fluid sample with a compound which generates hydrogen peroxide.

31. A claim according to claim 1 where the test for peroxidase comprises contacting a vaginal fluid sample with an enzyme-substrate system which generates hydrogen peroxide.

INTERNATIONAL SEARCH REPORT

International Application No PCT/US80/00618

I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) [3]

According to International Patent Classification (IPC) or to both National Classification and IPC

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II. FIELDS SEARCHED

Minimum Documentation Searched [4]

Classification System	Classification Symbols
U.S.	435/28,806; 23/230B,917

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched [5]

III. DOCUMENTS CONSIDERED TO BE RELEVANT [14]

Category *	Citation of Document, [16] with indication, where appropriate, of the relevant passages [17]	Relevant to Claim No. [18]
X	US,A, 3,472,738, PUBLISHED 14 OCTOBER 1969, FOSTER.	1-31
X	CA,A, 854,156, PUBLISHED 20 OCTOBER 1970, FOSTER.	1-31
X	N, CONTRACEPTION, ISSUED JUNE 1975, J.A. BLAIN ET AL, PEROXIDASE EN HUMAN CERVICAL MUCUS DURING THE MENSTRUAL CYCLE, PAGES 677-680.	1-31

* Special categories of cited documents: [15]

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"X" document of particular relevance

IV. CERTIFICATION

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(54) Title: SPECIFIC IMPENDING OVULATION INDICATOR

(57) Abstract

Method for detecting impending ovulation in the human female by testing means employable by the average person. The test method involves contating vaginal fluid samples with a bibulous mat containing an antibody against estrogen-induced peroxidase. The mat is then washed and tested for peroxidase.

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Description

Specific Impending Ovulation Indicator

Technical Field

This invention relates to methods of detecting impending ovulation in human females, including methods which are sufficiently simple so that a woman can carry out the test on herself without the aid of a physician.

Background Art

While prior methods of fertility or ovulation testing have been proposed, prior tests have one or more undesirable aspects. For example, in the prior art the method of utilizing thermometry (the basal body temperature method) provides information on fertility, but this test merely indicates that ovulation has already occurred and does not detect impending ovulation.

The prior ovulation detection methods involving an examination of cervical mucus for its flow properties, saline content, glucose content and the like, are also deficient in that they do not easily lend themselves to self-examination by the woman and require sampling of the posterior portion of the vagina. Similarly, microscopic examination of vaginal cells for staining characteristics and morphology require expensive apparatus and involve techniques which are usually beyond the skill of the average woman. Estrogen analysis of blood and urine is likewise complicated and difficult to carry out.

Means for peroxidase testing have been known since 1898. Such means have been used for over 75 years for the detection of blood, including commercial articles sold, for example, by Smith Kline and French Laboratories and by Miles Laboratories, for the detection of occult blood in urine and feces. Despite the long history

of the peroxidase test it has not been previously used to determine the surge in estrogen-induced peroxidase in vaginal fluid for the detection of impending ovulation. This may be due to the fact that pathological conditions or injuries resulting in blood being present in the vagina contribute to a false positive indication for estrogen-induced peroxidase. It is known that hemoglobin and its degradation products exhibit a peroxidase-like reaction and, indeed, this property is utilized in the occult blood test for urine and feces.

Disclosure of Invention

In the approximately two to three days prior to ovulation in the menstrual cycle of normal human females there is a surge in the amount of estrogen-induced peroxidase (EIP) in the vaginal fluid. A simple form of the invention contemplates the woman taking a sample of vaginal fluid with, for example, a moistened cotton swab and contacting the swab with, for example, a bibulous mat containing an antibody against EIP. After contact of the swab with the mat, the mat is washed with water to remove interfering substances which do not combine with the antibody. An EIP-antibody combination possesses peroxidase activity, hence a positive peroxidase test on the aforesaid bibulous mat which had been in contact with a vaginal fluid sample and washed, indicates that EIP was present in the vaginal fluid. A negative test for peroxidase indicates the absence of EIP. If EIP is found, it indicates impending ovulation. An advantage of the present invention is that a specific antibody to EIP is used and this antibody combines only with EIP and not with the interfering substances. Chromogenic substrates of peroxidase and a hydroperoxide are used as a test for peroxidase.

Best Mode For Carrying Out The Invention

A simple method for the detection of impending ovulation in women, as in the present invention, is of the highest importance to the human race and is of paramount interest to such prestigious organizations as the Population Council, the Ford Foundation, the National Institutes of Health and the World Health Organization. With the present invention a woman can, by herself, determine her impending fertile time. There is extensive clinical evidence that for women the fertile time commences within 12 to 72 hours of ovulation (C. Tietze Fertility and Sterility, Vol. 11, p. 485, 1960). By abstaining from coitus or by otherwise protecting herself from insemination during the fertile time, a woman can avoid pregnancy. Thus with the aid of the present invention, which enables a woman to determine her fertile time, this form of birth control could, if practiced widely, substantially reduce the rate of world population growth. Using the present invention one may practice birth control without interference with the normal female hormonal function, such as occurs with the contraceptive pill which is objectionable to certain segments of the world population on religious grounds, as well as to others on medical grounds due to the possible serious side effects. A woman practicing abstinence during the fertile period as determined by the present invention may avoid the need for contraceptive devices, such as the intrauterine device, for birth control which are considered undesirable to some.

The present invention may also be an aid to couples who wish to have a child, but have failed because of, for example, incorrect timing of coitus. Thus it may be seen that because the present invention can be a valuable aid in family planning, it serves an important humanitarian purpose.

According to the present invention the woman moistens a cotton swab with vaginal fluid and then brings it into contact with a bibulous mat containing an antibody against EIP. The mat is then washed and tested for the presence of peroxidase with a hydroperoxide and a chromogenic substrate of peroxidase.

The hydroperoxide may be hydrogen peroxide or a hydroperoxide generating system, such as the inorganic peroxides, sodium peroxide, barium peroxide, strontium peroxide, sodium perborate, and the like, or organic hydroperoxides, such as methyl hydroperoxide or ethyl hydroperoxide. Many compounds, for example, sodium peroxide, barium peroxide, strontium peroxide, sodium perborate, and the bis (1-hydroxyalkyl) peroxides generate hydrogen peroxide when moistened. Enzymatic reactions such as the action in air of L-amino oxidase on L-amino acids also generate hydrogen peroxide. The word hydroperoxide as used herein and in the claims is meant to include all of the compounds and types of compounds of this type including the hydroperoxide generating compounds and enzyme systems which generate hydrogen peroxide.

A substance which becomes colored in the presence of peroxidase and a hydroperoxide is designated herein as a chromogenic substrate of peroxidase or as a chromogen. Chromogenic peroxidase substrates or chromogens which may be employed in the present invention include the following substances:

1) Monoamines, such as aniline and its derivatives, orthotoluidine, para-toluidine, etc.;
2) Diamines, such as ortho-phenylenediamine, N,N dimethylpara-phenylenediamine, N,N diethyl-phenylenediamine, benzidine, 3,3',5,5', tetra-methyl benzidine, dianisidine, o-tolidine, etc.;

3) Phenols, such as phenol per se, thymol, ortho, meta and para-cresols, alpha-napthol, p,p-dihydroxybiphenyl, phloroglucinol and guaiacol;

4) Aromatic acids, such as salicylic, pyrocatechuic and gallic acids;

5) Leucodyes, such as leucomalachite green (to produce malachite green) and leucophenolphthalein (desirably employed in an alkaline medium);

6) Colored dyes, such as 2,6 dichlorophenol indophenol;

7) Various biological substances, such as epinephine, the flavones, tyrosine, dihydrophenylalanine (producing an orange-reddish color) and tryptophane. Other substances such as gum guaiac, guaiaconic acid, Nadi reagent (producing a bluish color), bilirubin (producing a greenish color), iodides (which produce a brown color and, if starch is present, produce a deep blue color which is much stronger than iodide alone).

Some of the substances may be most effectively used in combination rather than individually. For example, Nadi reagent is such a mixture, namely naphthol and p-phenylenediamine, which gives a better final color than the individual components. Another example is a mixture of 4-amino antipyrine and 1,7-dihydroxynaphthaline.

Many of the chromogens, notably 3,3',5,5' tetramethyl benzidine, orthotolidine and p,p'-biphenol give a more intense color if halogen ions, such as iodide and bromide ions, or if halogenoid ions, such as thiocyanate and selenocyanate ions, are present.

One of the preferred chromogens of the invention comprises 3,3',5,5' tetramethyl benzidine and potassium

thiocyanate; this mixture yields an intense blue color in a positive test. Another preferred chromogen is a mixture of p,p'-biphenol and potassium thiocyanate.

Substrates which change their fluorescence in the presence of a peroxidase and hydrogen peroxide include a loss of fluorescence of scopoletin or a production of fluorescence with, for example, dichlorofluorescin or homovanillic acid. Chemiluminescence is produced in the presence of peroxidases and hydrogen peroxide for the following typical substances, Luminol, zinc tetra phenylporphyrine and the like.

Antibodies against human vaginal fluid EIP may be prepared by injecting rabbits with human vaginal fluid EIP purified according to the procedures described by E. R. DeSombre and C.R. Lytlle in Cancer Research, Volume 38, November 1978, pp. 4086-4099; but, instead of using rat mammary tumor extract, the said human vaginal fluid sample is used. The injections into rabbits take place at regular intervals together with Freund's complete adjuvant in a manner well known to those skilled in immunology. After immunization to EIP has been achieved, antisera are collected. The antisera may be treated by methods well known to immunologist to obtain globulin samples which are enriched in EIP antibodies. The term antibody as used herein and in the claims denotes pure antibody against EIP, purified antibody against EIP, solutions comprising antibody against EIP, mixtures comprising antibody against EIP, antisera against EIP and also includes antibody against the apoenzyme of EIP. Not only will antibodies against EIP function in the invention, but also antibodies against the apoenzyme of EIP will function in this invention and should be understood to be included herein and in the claims.

Instead of injecting rabbits in the aforestated procedure for preparing the antibody to EIP, the technique involving lymphocyte hybridomas may be employed. Lymphocyte hybridoma techniques are described in the book entitled Lymphocyte Hybridomas published by Springer Verlag Berlin, Heidelberg: New York, 1978. The technique for making monoclonal antibodies by the technique of lymphocyte hybridomas is described in detail in the chapter by M. M. Trucco, J. W. Stocker, and R. Ceppelini in the aforesaid book, where in place of human lymphoblastoid cells employed by the aforesaid workers, purified EIP from human vaginal fluid samples or the apoenzyme of it may be used. Monoclonal antibodies against different antigenic determinants in EIP or its apoenzyme may be mixed to effect a precipitating antibody. Either monoclonal or mixed monoclonal antibodies may be employed in the present invention.

Some animals may produce species specific EIP which may be similar enough so that the antibodies to it may cross-react with human vaginal fluid EIP. In such cases animal vaginal fluid EIP may be used to produce antibodies which may be used in place of the human antibody to EIP. Tissue cultures of human estrogen-sensitive tissue, such as human endometrium and the like, may produce the apoenzyme of EIP, in which case EIP apoenzyme from such tissue cultures may be used as a source of apoenzyme which may be used in the present invention.

The apoenzyme of human EIP may be produced by the chemical synthesis of DNA and recombinant DNA methods well known to those skilled in the art. Expression in E. Coli of chemically synthesized genes for human EIP or its apoenzyme may be carried out as described by D. V. Goeddel et al. in Proc. Nat. Acad. Sci. USA, Vol. 76,

January 1979, pp. 106-110 where instead of human insulin one uses the aforesaid purified human EIP or its apo-enzyme.

A preferred embodiment of the present invention comprises antibody to EIP attached to a solid support. There are many methods well known to those skilled in the art of affixing an antibody to a bibulous mat or to the surface of other solid support materials such as wood, plastic, glass, ceramic and the like. Said solid support may be in the form of a film, spheres, beads, tubes, ion exchange materials (such as glass beads comprising arylamino groups or comprising carboxyl groups such as produced by Corning Glass Works), filter paper loaded with ion exchange resins (such as produced by Whatman Paper Company), or paper loaded with Duolite ion exchange resin (the resin being made by Diamong Shamrock Company). With ion exchange resins the antibody is adsorbed but the antibody is not covalently linked. Antibody may be covalently linked to solid supports which comprise aryl amino groups or which comprise carboxyl groups by methods well known in the art. For example, the aryl amino groups on solid supports may be diazotized with nitrous acid (sodium nitrite and freshly added hydrochloric acid), washed with water and then treated with a solution comprising the antibody in sodium bicarbonate solution. Antibody may be coupled to carboxyl groups on solid supports by means of the carbodiimide reaction.

Example 1

Vaginal samples are taken daily starting on day 5 of a woman's menstrual cycle, where day 1 is taken as the day when menstruation began. Such vaginal samples can be obtained using a standard six inch cotton-tipped

swab ("Puritan", Hardwood Products Co.). The cotton end can be moistened with water and rolled gently on the wall of the anterior vagina.

The swab, while still moist, is then contacted with a paper to which was affixed an antibody to estrogen-induced peroxidase. After contact for 10 to 30 minutes, the paper was washed in water. The still moist paper containing the antibody is pressed against starch-iodide test paper and the test paper is moistened with 0.01% hydrogen peroxide. A strong blue color is regarded as a positive test and weak or no coloration is regarded as a negative test.

For best results it is preferable to start on day 5 or day 6 for the daily routine. The first positive test may be taken to indicate that ovulation is impending and will follow within two or three days.

In place of starch-iodide test paper, filter paper impregnated with 3,3',5,5' tetramethylbenzidine and potassium thiocyanate, impregnated with p,p' biphenol and sodium thiocyanate, or guaiac, or orthotolidine or other chromogenic substrates may be used. The "Hemoccult" test of Smith Kline and French Laboratories, which according to the manufacturer consists of paper impregnated with orthotolidine, may also be used.

Example 2

In place of the cotton-tipped swab of Example 1, the vaginal fluid sample is obtained by directly contacting the vaginal wall with a piece of moist filter paper to which an antibody to estrogen-induced peroxidase was attached. The filter paper was affixed toward the end of a plastic strip about 0.012 inches thick, 0.20 inches wide and 8 inches long and made of cellulose acetate.

The paper is removed from the vagina after 20 minutes and was then washed with water. While still moist the paper is contacted with the occult blood detector part of the commercially available "Hemicombistix" (Ames Company), which according to the manufacturer comprises orthotolidine and cumene hydroperoxide. A positive test (i.e., strong blue coloration) indicates impending ovulation.

In place of the occult blood detection part of "Hemicombistix", the occult blood peroxidase detector manufactured by Boehringer Company may be used, which detector, according to the manufacturer, contains orthotolidine and dimethyl dihydroperoxy hexane.

In place of the above-mentioned peroxidase detectors, starch-iodide paper containing dry sodium perborate may be used.

Example 3

In place of the plastic strip in Example 2 in which the antibody to estrogen-induced peroxidase is toward one end and a separate occult blood detector is provided on another strip, a strip was made with both the antibody and the blood detector as parts of the same strip, the antibody being at one end and the detector at the other end. The contact between the two was achieved by folding the strip at its middle and holding the ends in contact after the antibody end had been contacted with the vagina and had been washed.

Example 4

A swab similar to that of Example 1 and containing vaginal fluid is dipped into a 1% solution of sodium chloride contained in a test tube. Affixed to the inner wall of the test tube. Affixed to the inner wall of the test tube is an antibody to estrogen-induced peroxidase. After 30 minutes the swab is

removed from the test tube and the test tube is rinsed with water. Into the test tube is poured a solution containing 0.001% 3,3',5,5' tetramethylbenzidine to which had been freshly added 0.005% final concentration of hydrogen peroxide. A blue color is a positive indication of estrogen-induced peroxidase in the vaginal sample.

Example 5

A swab similar to that of Example 1 and containing vaginal fluid can be dipped into a solution containing 0.1 milligram per milliliter of rabbit antisera against estrogen-induced peroxidase. After 30 minutes activated charcoal is added. It is occasionally stirred, and the suspension is filtered. To the filtrate is added 0.001% final concentration of 3,3',5,5' tetramethylbenzidine and 0.1% final concentration potassium iodide, to which a 0.005% final concentration of hydrogen peroxide is freshly added. A blue color is a positive indication of estrogen-induced peroxidase in the vaginal sample.

Example 6

A swab similar to that of Example 1 and containing vaginal fluid can be dipped into a solution containing 0.01 milligram per milliliter of mixed clonal antibody to estrogen-induced peroxidase as described herein. The mixture is centrifuged and the supernatent is allowed to stand for 12 hours. The system is centrifuged again, the supernatent discarded, and the pellet was suspended with stirring into a 0.1% sodium chloride solution. After the system is again centrifuged, the pellet is contacted with starch-iodide paper and moistened with a 0.0005% hydrogen peroxide. A blue coloration is a positive indication of estrogen-induced peroxidase in the vaginal sample.

Claims

1. An indicator for detecting impending ovulation comprising a substrate which includes an antibody against estrogen-induced peroxidase in vaginal fluid samples and means for association therewith to detect estrogen-induced peroxidase immunoadsorbed by said antibody.
2. An indicator according to claim 1, wherein said means includes a chromogenic substrate of peroxidase.
3. An indicator according to claim 1, wherein said means includes a hydroperoxide.
4. An indicator according to claim 1, wherein said means includes a chromogenic substrate of peroxidase and a hydroperoxide.
5. A claim according to claim 1, where said substrate is a solid support.
6. A claim according to claim 2 where said chromogenic substrate is on a solid support.
7. A claim according to claim 3 where said hydroperoxide is on a solid support.
8. A claim according to claim 4 where said hydroperoxide and said chromogenic substrate are on a solid support.
9. A claim according to claim 4 where said solid support is a bibulous mat.
10. A claim according to claim 5 where said solid support is a bibulous mat.
11. A claim according to claim 6 where said solid support is a bibulous mat.
12. A claim according to claim 7 where said solid support is a bibulous mat.

13. A claim according to claim 2 where the chromogenic substrate of peroxidase is guaiac.

14. A claim according to claim 2 where the chromogenic substrate of peroxidase is bilirubin.

15. A claim according to claim 2 where the chromogenic substrate of peroxidase is starch and a soluble iodide salt.

16. A claim according to claim 2 where the chromogenic substrate of peroxidase is orthotolidine.

17. A claim according to claim 2 where the chromogenic substrate of peroxidase is p,p'biphenol and a soluble thiocyanate salt.

18. A claim according to claim 2 where the chromogenic substrate of peroxidase is 3,3'5,5'tetramethyl-benzidine and a soluble bromide salt.

19. A claim according to claim 2 where the chromogenic substrate of peroxidase is 3,3',5,5' tetramethyl-benzidine and a soluble iodide salt.

20. A claim according to claim 2 where the chromogenic substrate of peroxidase is orthodianisidine and a soluble iodide salt.

21. A claim according to claim 3 where the said hydro-peroxide is a substance which generates a hydro-peroxide when moistened.

22. A claim according to claim 3 where said hydro-peroxide is an enzyme-substrate system which generates hydrogen peroxide.

23. An indicator according to claim 2 wherein the substrate is a solid support which comprises in different regions of said support antibody against estrogen-induced peroxidase from vaginal fluid, a hydroperoxidase and a chromogenic substrate of peroxide.

24. An indicator according to claim 3 wherein the substrate is a solid support which comprises in different regions of said support antibody against estrogen-peroxidase from vaginal fluid and a hydroperoxide.

25. An indicator according to claim 2 wherein the substrate is a solid support which comprises in different regions of said support antibody against estrogen-induced peroxidase from vaginal fluid and a chromogenic substrate of peroxidase.

26. A method for producing antibodies against estrogen-induced peroxidase by injection of an animal with human vaginal fluid.

27. A method for producing antibodies against estrogen-induced peroxidase using in the lymphocyte hybridoma method human vaginal fluid.

28. A method for producing antibodies against estrogen-induced peroxidase by injection of an animal with an apoenzyme of estrogen-induced peroxide.

29. A method for producing antibodies against estrogen-induced peroxidase using in the lymphocyte hybridoma method an apoenzyme of estrogen-induced peroxidase.

30. A method for producing the apoenzyme of estrogen-induced peroxidase from tissue cultures of estrogen-sensitive tissue.

31. A method for producing the apoenzyme of estrogen-induced peroxidase from recombinant DNA methods.

32. A method for detecting impending ovulation in which a substrate which includes an antibody against estrogen-induced peroxidase is contacted with a vaginal fluid sample and then a test is performed for estrogen-induced peroxidase immunoadsorbed onto said substrate.

33. A method according to claim 32 where said substrate is an inert solid support for said antibody.

34. A method according to claim 33 wherein said test for peroxidase comprises a chromogenic substrate for peroxidase and a hydroperoxide.

INTERNATIONAL SEARCH REPORT

International Application No PCT/US80/00813

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) [3]

According to International Patent Classification (IPC) or to both National Classification and IPC

INT. CL.[3] A61K 39/00;C12Q 1/66, 1/28; G01N 33/48
U.S. CL. 23/230B; 424/12,85; 435/7,28

II. FIELDS SEARCHED

Minimum Documentation Searched [4]

Classification System	Classification Symbols
U.S.	23/230B; 435/7,28,805; 424/12,85

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched [5]

III. DOCUMENTS CONSIDERED TO BE RELEVANT [14]

Category *	Citation of Document, [16] with indication, where appropriate, of the relevant passages [17]	Relevant to Claim No. [18]
X	US,A, 3,817,837, PUBLISHED 18 JUNE 1974, RUBENSTEIN ET AL.	1-34
X	US,A, 4,070,492, PUBLISHED 24 JANUARY 1978, SPECTOR.	1-34
X	US,A, 3,472,738, PUBLISHED 14 OCTOBER 1969, FOSTER.	1-34
X	US,A, 3,644,177, PUBLISHED 22 FEBRUARY 1972, ZYK.	1-34
X	N, CONTRACEPTION, ISSUED JUNE 1975, J.A. BLAIN ET AL, PEROXIDASE IN HUMAN CERVICAL MUCUS DURING THE MENSTRUAL CYCLE, PAGES 677-680.	1-34

* Special categories of cited documents: [15]

"A" document defining the general state of the art

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"T" later document published on or after the international filing date or priority date and not in conflict with the application, but cited to understand the principle or theory underlying the invention

"X" document of particular relevance

IV. CERTIFICATION

Date of the Actual Completion of the International Search [2]	Date of Mailing of this International Search Report [2]
08 OCTOBER 1980	14 OCT 1980
International Searching Authority [1]	**Signature of Authorized Officer** [20]
ISA/US	ROBERT J. WARDEN